PB173987

Continuous Air Monitoring Program

WASHINGTON, D. C. 1962 - 1963

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE Public Health Service

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Continuous Air Monitoring Program in Washington, D. C.

1962-1963

COMPILED BY

AIR QUALITY SECTION
LABORATORY OF ENGINEERING AND PHYSICAL SCIENCES
ROBERT A. TAFT SANITARY ENGINEERING CENTER

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Division of Air Pollution

Cincinnati, Ohio
September 1966

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Public Health Service Publication No. 999-AP-23

CONTROL *NOW*-
FOR CLEAN AIR!

PREFACE

The Continuous Air Monitoring Program, commonly known as CAMP, represents the first large-scale effort to obtain comparable, continuous, concurrent data on gaseous air pollutant levels in the atmospheres of a number of major American cities. The fundamental premise in the establishment of the program was the need for such data to augment research on the nature of air pollution and its impact on man and his environment. Consequently, the Public Health Service wishes to encourage all interested research personnel to participate in exploiting the many avenues of investigation opened by this information. To make the CAMP data immediately available for such use, brief interim summaries have been prepared monthly since the inception of the program. Sufficient information has now been accumulated to warrant publishing a series of more comprehensive reports, of which this volume is a part. A similar publication summarizing the results of 1962-1963 operations in Cincinnati, Ohio, is available, and volumes are planned for data from other cities and subsequent years. In addition to this series, special reports discussing in detail specific aspects and interpretations of the data will be prepared periodically; currently in progress are studies of the effects of sample averaging time, of the ratios of peak to average concentrations, and of pollutant interrelationships.

This volume presents the results of operations in Washington, D.C., during 1962 and 1963. It is intended to serve not only as a report on CAMP operations, but also as an introduction to the subject of gaseous air pollution for the technical reader unfamiliar with such work. Following a summary of the background of CAMP and its current operations, Part 1 presents background information about the Washington area to assist the reader in visualizing the interpretations of the data in the light of factors peculiar to Washington. Part 2 contains a brief summary of the data with analysis and discussion, and Part 3 summarizes the data as hourly, daily, and monthly mean concentrations to permit the use of this volume as a reference. An appendix describes the instrumentation.

In addition to the series of publications, copies of the CAMP master data files, maintained on magnetic tapes for electronic computer analysis, can be made available for use by anyone having access to computer facilities. Since data from the National Air Sampling Network of the Public Health Service, as well as large quantities of mortality, morbidity, meteorological, and socioeconomic data, are also available on magnetic tapes from various sources, the possibilities for computer analysis are almost limitless. Correspondence concerning the availability or use of CAMP data should be directed to the Chief, Air Quality Section, Laboratory of Engineering and Physical Sciences, Division of Air Pollution, Robert A. Taft Sanitary Engineering Center, 4676 Columbia Parkway, Cincinnati, Ohio 45226.

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ACKNOWLEDGMENT

The Public Health Service acknowledges with appreciation the many contributions of the several cooperating local agencies to the operation of the Continuous Air Monitoring Program. In the publication of this volume with data from Washington, particular appreciation is expressed to the District of Columbia Department of Public Health, Air Pollution Section, for the operation of the station and for obtaining the station site.

ABSTRACT

This report presents the results of the operation of the Public Health Service Continuous Air Monitoring Program (CAMP) in Washington, D.C., during 1962 and 1963. Data on atmospheric levels of sulfur dioxide, oxides of nitrogen, total oxidants, total hydrocarbons, and carbon monoxide are summarized, analyzed, and discussed. The data are tabulated as hourly, daily, and monthly mean concentrations; background information about Washington and a description of the instrumentation used are included.

PLEASE MAKE THE FOLLOWING CHANGE ON PAGE 42, Figure 2-22:

The < and > symbols in the labels on the curves should be reversed to read " > 500 calories/cm^2/day" on the upper curve, and " < 500 calories/cm^2/day" on the lower curve.

THE CONTINUOUS AIR MONITORING PROGRAM

It has been estimated that as many as 6000 urban areas in the United States are affected to some degree by air pollution, but air quality measurements have been made in no more than a tenth of these communities.[1] Generally, measurements are limited to particulate pollution, i.e. dusts and soot in the air. Data on particulate weight from dustfall collectors and high-volume filter samplers are available most frequently; measurements of particulate soiling in COH or RUDS* units are less commonly made.

In recent years, there have been significant increases in the technical ability and legal authority needed to control the discharge of particulates to the air, and some urban areas have made gratifying progress in reducing such pollution. During this period, however, public awareness and official concern has been expanded to encompass the less obvious, but more complex, problems of gaseous pollutants. Even communities that have never been particularly troubled by particulate pollution are showing increased evidence of photochemical smog, a serious manifestation of gaseous pollution, in periodic episodes of decreased visibility, eye irritation, and damage to vegetation.

Available data on gases in the air, however, have been even more limited in distribution and in quantity than the sparse particulate data. The National Air Sampling Network of the Public Health Service has measured sulfur dioxide and nitrogen dioxide in about 50 cities by means of 24-hour integrated samples taken biweekly. The cost of more frequent sampling has limited routine gas monitoring to only the largest urban areas. In some of the smaller cities, intensive studies of some gaseous pollutants have been made by local agencies and the Public Health Service during cooperative air pollution surveys,[2,3,4] but these sampling programs have been conducted for relatively short periods of time. The rare instances of daily, 24-hour sampling programs that have been undertaken have usually been restricted to the collection of integrated samples of at least 2 hours duration, despite the knowledge that the concentrations of gaseous pollutants can change significantly within a few minutes.

Understanding of the significance of gaseous pollution is handicapped not only by the scarcity of data, but also by differences among several methods of sampling for any single pollutant. These differences have limited comparison among, and joint interpretation of, the results of numerous studies. In addition, concurrent data for more than one pollutant at any one site are almost completely lacking; this lack handicaps studies of pollutant interrelationships and the more complex effects of pollution.

The need for continous concurrent data for several gases, obtained by comparable methods in various communities, was recognized some years ago. It was also apparent, however, that the requisite sampling program would be far more difficult than any effort previously attempted. Completely satisfactory instrumentation was lacking. The subject itself — the rapid and concurrent variation of atmospheric pollutant levels — was little understood. Questions of which pollutants could or should be measured were largely unanswered. Furthermore, few groups interested in air pollution could marshal the financial or manpower resources needed for such an undertaking.

In 1960, Congress provided impetus and financial support for a program capable of resolving some of the problems of gaseous pollutants and their sampling. Public Law 86-493 directed the Public Health Service to accelerate research into the effects of air pollutants from motor vehicles on human health. Since such pollutants are largely gases for which available data were inadequate, the Continuous Air Monitoring Program was established to measure the concentrations of various gases in the ambient atmosphere. Development of the necessary instrumentation was accomplished by the Public Health Service through a contract with a commercial instrumentation firm, and the operation of the program was assigned to the Air Quality Section of the Laboratory of Engineering and Phusical Sciences in the Division of Air Pollution. The first station was opened in Cincinnati in October 1961, and by early 1962 five additional stations were operating. During 1962 and 1963 these six stations were located in Chicago, Cincinnati, New Orleans, Philadelphia, San Francisco, and Washington, and were operated by the Public

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*COH (Coefficient of Haze) units are based on the transmission of light through a soiled filter; RUDS (Reflectance Units of Dirt Shade), on the reflection of light from a soiled filter. Both measure primarily the smaller particulates.

Health Service in cooperation with the local air pollution control agencies. The instruments at the New Orleans station were subsequently moved to St. Louis in 1964, and the San Francisco equipment to Denver in 1965. Comparable data are also obtained in Los Angeles and New York, at stations provided and operated by local groups. Insofar as practicable, the stations are comparably located. They have been placed in or near the principal business district in each city, and situated wherever possible to avoid the influence of significant point sources of pollution.

The primary objective in establishing the Continuous Air Monitoring Program was to overcome at least partially the deficiencies in existing data on the nature of air pollution by providing information that was heretofore unavailable, i.e., continuous, concurrent data on several gaseous pollutants obtained comparably in a number of urban areas. It is hoped that this effort will stimulate further air pollution investigations and the control of pollution where required; hence the program for publication of the CAMP data has been planned to make this information available for use by those persons interested in any of the several areas of air pollution research and control.

Since a CAMP station constitutes only one sampling site in a given community, the data do not necessarily quantitate air pollution levels beyond the immediate vicinity of the station; however, the data do have application to studies of the broad patterns of temporal variations and pollutant interrelationships that affect the entire urban area. The data have already demonstrated significant occurrences of photochemical smog in communities other than in California, and further investigation of this phenomenon is anticipated. The CAMP data are now being used in conjunction with meteorological data in dynamic mathematical diffusion models; in studies of the effect of large, single sources of pollution on ambient concentrations; and in the differentiation of temporal and geographic variations.

Delineation of the effects of air pollution on man and his environment depends upon knowledge of the variability of pollutant concentrations as well as of the average levels. In the field, CAMP data can be used in epidemiological studies of the health effects of various pollutant combinations and of changing pollution levels; in the laboratory, the data can be applied to the selection of realistically varying pollutant concentrations and combinations for the exposure of animals and plants. Pollution effects and behavior can also be examined in terms of various time-concentration arrays. CAMP data thus provide some of the information needed to evaluate proposed air quality criteria and the impact of implementing such criteria through air conservation programs.

The improvement and development of techniques for measuring air quality are also of considerable importance. Relationships of peak to average concentrations over various periods of time are expected to provide guidance toward optimum balance in the use of continuous or integrating types of instruments, or both, in the light of cost versus information gained. Similarly, studies of pollutant interrelationships may indicate that one pollutant, or a combination of a few, can provide a good index to the behavior of others. Either of these factors could affect both the type and the cost of air quality measurements.

PART 1: WASHINGTON, D. C.

This brief discussion of the Washington area is included to provide a basis for visualizing the interpretations of the data in Part 2 in the light of features peculiar to the Washington area, and to assist in evaluating the applicability of these interpretations to other locations.

TOPOGRAPHY AND LAND USE

The city of Washington is co-extensive with the District of Columbia, which occupies an area of about 69 square miles between Maryland and Virginia (see Figure 1-1). It is situated at the confluence of the Potomac and Anacostia Rivers, at the upper end of the Potomac tidal basin. Washington lies on the relatively flat Eastern coastal plain; elevations in the area range from 10 to 400 feet above sea level. The only distinctive features of the terrain are the bluffs bordering the Potomac River as it enters the District from the Northwest, and the Rock Creek ravine running north and south through the middle of the District's northwest sector.

The characteristics of a major urban center change with distance from the central city core. The Standard Metropolitan Statistical Area (SMSA) of Washington* (Figure 1-1) includes the District of Columbia, the Maryland counties of Montgomery and Prince Georges, the Virginia counties of Arlington and Alexandria, and the independent Virginia cities of Alexandria and Falls Church, with a total population over 2 million. Much of the outlying area is rural and very sparsely inhabited, however, making the SMSA a poor index of the extent of urbanization, and hence a poor basis for comparison with other cities (Table 1-1). The Washington Urbanized Area,* which includes only those incorporated places of at least 2500 persons and adjacent unincorporated census tracts of 1000 or more persons per square miles, is also indicated in Figure 1-1; the Urbanized Area contains over 90 percent of the population on about 23 percent of the land, a density of 5300 persons per square mile. The City of Washington itself is the center of population; it is the ninth largest city in the country, with a population over

TABLE 1-1
COMPARATIVE URBAN STATISTICS

City	Land area, sq mi	Population		Housing			Private passenger car density, cars/sq mi	Manufacturing employment, %	Median family income, dollars
		Total, 1000's	Density, persons/sq mi	Density, units/sq mi	Single units, %	<10 yr old, %			
Washington, D. C.									
City	61	764	12,440	4,280	40	16	2600	6	5990
Urbanized area	341	1,808	5,310	1,670	57	36	1520	8	7610
SMSA	1,485	2,002	1,350	416	60	37	390	8	7580
Other East Coast cities[a]									
Baltimore	79	939	11,890	3,670	71	14	1570	28	5660
Boston	48	697	14,590	4,990	16	5	1250	24	5750
Other CAMP Cities[a]									
Chicago	224	3,550	15,840	5,410	24	10	1640	34	6740
Cincinnati	77	503	6,500	2,220	37	11	1170	29	5700
Denver	71	494	6,960	1,880	66	28	1800	18	6360
Los Angeles	455	2,479	5,450	6,550	60	31	1880	27	6900
New Orleans	199	628	3,160	1,020	50	17	770	14	4810
New York	315	7,782	24,700	8,750	13	13	1720	26	6090
Philadelphia	127	2,003	15,740	5,100	74	11	1540	33	5780
St. Louis	61	750	12,300	4,320	35	7	1460	31	5360
San Francisco	45	740	15,550	6,960	36	8	1460	16	6720

[a] Data are for cities proper, except passenger-car densities, which represent urbanized areas.
Source: Bureau of the Census, References 5 and 6.

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*1960 Bureau of the Census definitions.

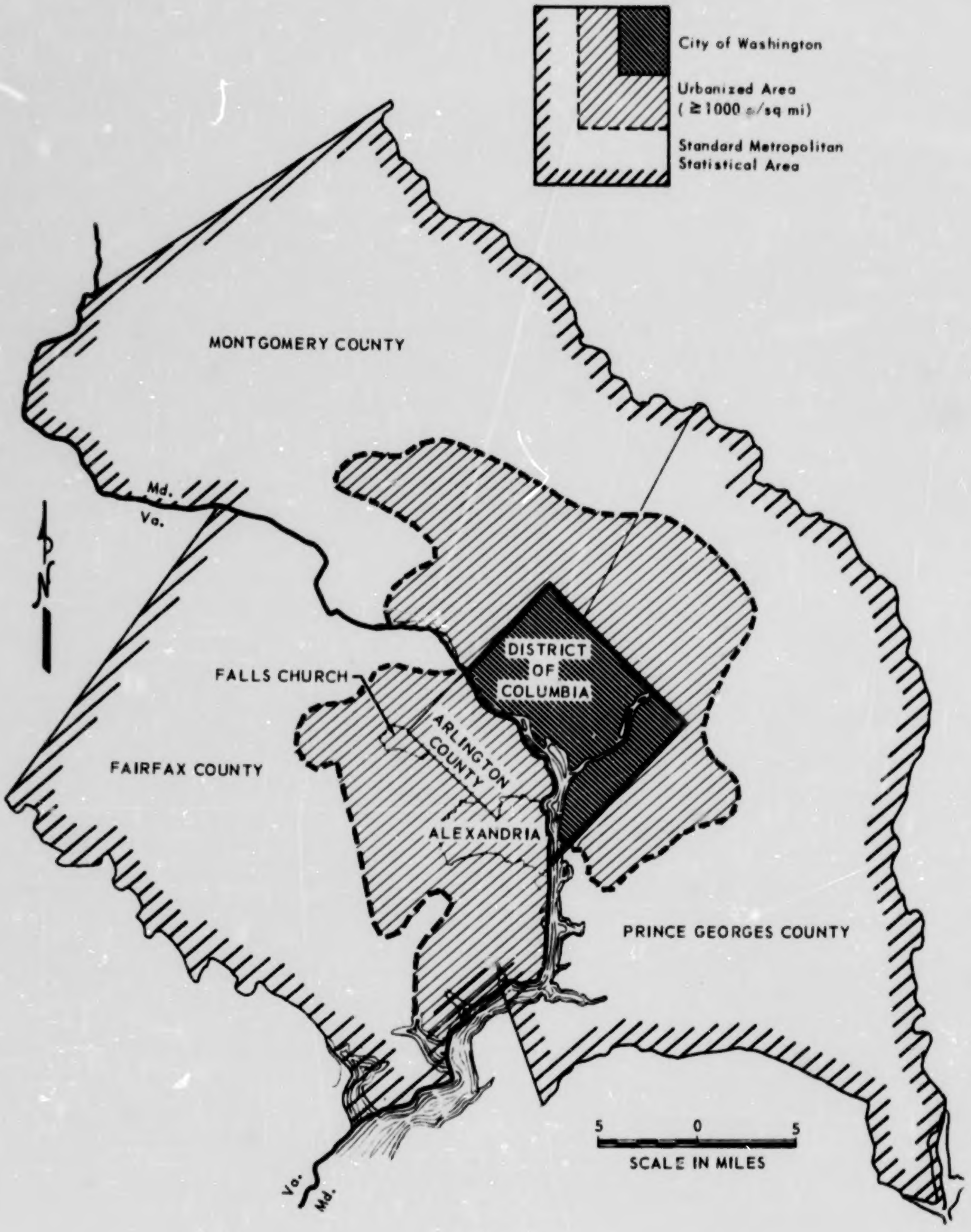
City of Washington
Urbanized Area
(≥1000 p/sq mi)
Standard Metropolitan
Statistical Area
MONTGOMERY COUNTY
Md.
Va.
N
FALLS CHURCH
DISTRICT
OF
COLUMBIA
ARLINGTON
COUNTY
FAIRFAX COUNTY
ALEXANDRIA
PRINCE GEORGES COUNTY
5
0
5
SCALE IN MILES
Va.
Md.

Figure 1-1. Washington metropolitan area.

760,000 and a population density exceeding 55,000 per square mile in some areas and averaging more than 12,000 per square mile (Figure 1-2). Because the sampling station is located on the fringe of the downtown area, statistics for the City of Washington are the most appropriate index with reference to air pollution as measured by CAMP. Similarly, the comparative statistics for other CAMP sites (and two other east coast cities) in Table 1-1 are based on the central cities.

Washington is essentially an institutional city, with most of the nonresidential land used for governmental purposes; a 1955 survey indicated that 42 percent of the land in the District of Columbia was owned by the Federal Government. The only portions of the area that are somewhat industrialized are located in the Alexandria - South Arlington area of Virginia and in the northeast sector of the District of Columbia.

The relatively minor role of industry in Washington is also evident in Table 1-2, a summary of employment; manufacturing activities provide only 4 percent of the total employment in Washington. The Federal Government, on the other hand, employs the largest segment of the work force. In fact, all levels of government, Federal, state, and local, including nearby military establishments, employ some 40 percent of the working population in administrative, scientific, and clerical occupations, most of which do not involve the production of air pollution.

TABLE 1-2
ESTIMATED EMPLOYMENT IN THE WASHINGTON METROPOLITAN AREA, DECEMBER 1960

Classification	Washington	Suburban	Total
Federal Government (civilian)	174,400	64,500	238,900
Military service	23,800	34,600	58,400
District, state and local governments	25,100	27,700	52,800
Government: total	223,300	126,800	350,100
Wholesale and retail trade	83,700	61,700	145,400
Self-employed	33,000	25,900	58,900
Construction	21,100	29,500	50,600
Professional services and organizations	42,500	7,300	49,800
Transportation, communication, and public utilities	28,400	17,900	46,300
Personal services and domestics (private homes)	28,300	15,800	44,100
Finance, insurance, and real estate	25,600	12,700	38,300
Business, repair, and recreation services	17,200	19,200	36,400
Manufacturing	20,700	14,500	35,200
Miscellaneous	8,500	8,700	17,200
Total	532,300	340,000	872,300

Source: Public Health Service, Reference 7.

PRINCIPAL SOURCES OF POLLUTION

Because the minimal industrial activity in the Washington area is generally restricted to light manufacturing, process losses are negligible, and the vast majority of gaseous air pollution is produced by the combustion of fuels for transportation, heating, and electric power generation. Combustion of gasoline and diesel fuel for transportation is responsible for the largest portion of carbon monoxide, oxides of nitrogen, and hydrocarbon emissions. The use of coal, fuel oil, and natural gas for space heating and electric power generation contributes most of the sulfur dioxide pollution and a significant portion of the oxides of nitrogen emissions.

Gaseous pollution from motor vehicles is a proportionally greater problem in Washington than in most areas, largely because of a very high density of vehicles and the minimal industrial contribution. Although the density of private passenger cars in the Urbanized Area (Table 1-1) is no greater than in some other urban areas, the total motor vehicle density in the city proper is one of the highest among the major cities in the country. In addition to the 2600 private passenger cars per square mile in Table 1-1, 20,000 trucks and busses, 10,000 taxicabs, and large fleets of government and military vehicles raise the total to a density of over 4000 motor vehicles per square mile.[8] When automobiles owned in the suburbs, through traffic on several major highways, and a large number of tourists' automobiles are also included, the total rises to about 700,000 vehicles, which daily consume 1,950,000 gallons of gasoline and over 48,000 gallons of diesel fuel in the Washington Standard Metropolitan Statistical Area (SMSA). The vehicular density is concentrated still further in the downtown core by a massive influx of suburban commuters who work in downtown Washington; traffic survey data indicate that about half the vehicles in the area enter and leave the city daily, and that over a third of them concentrate in 1 square mile of the downtown core.

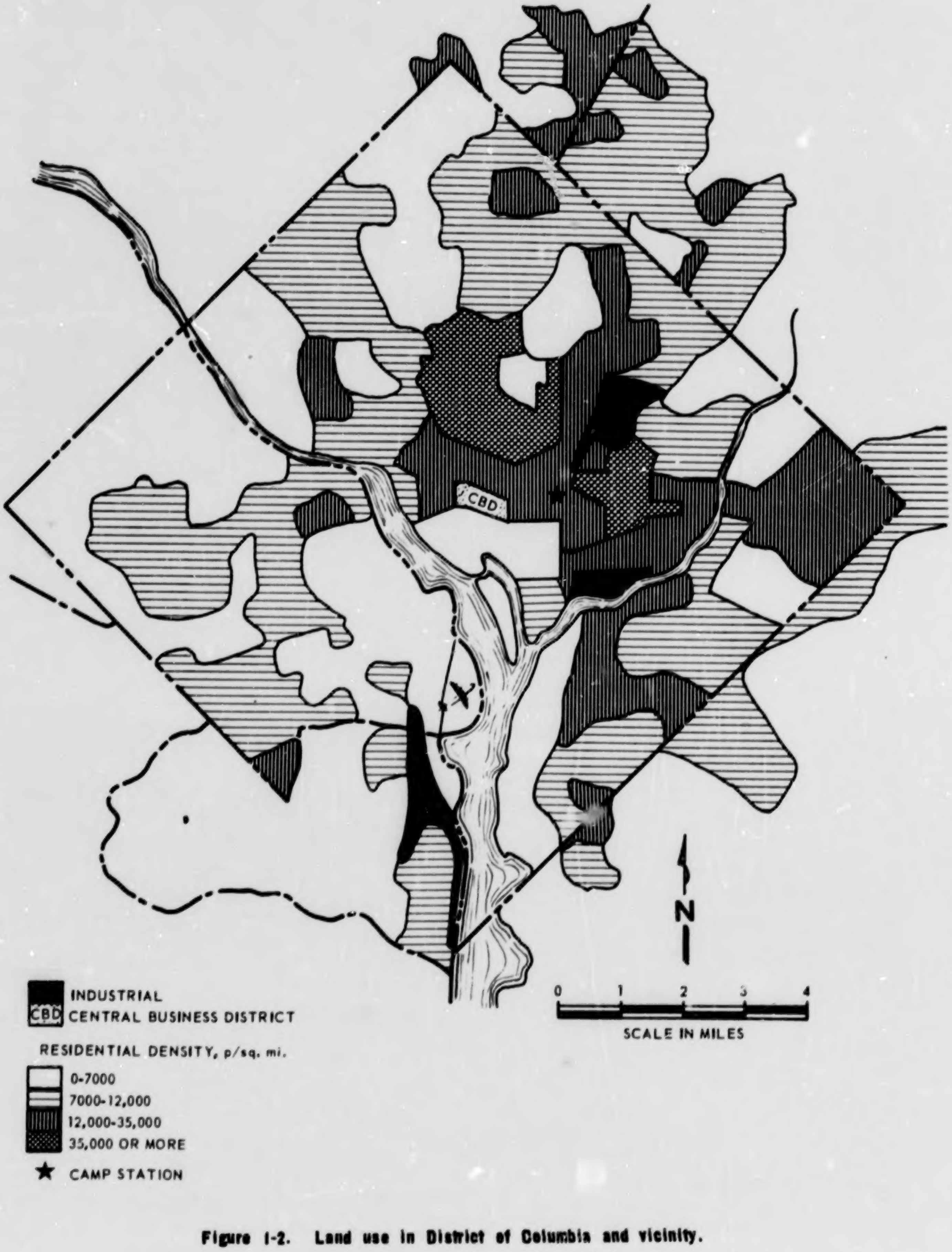
CBD
N
0
1
2
3
4
SCALE IN MILES
INDUSTRIAL
CBD CENTRAL BUSINESS DISTRICT
RESIDENTIAL DENSITY, p/sq. mi.
0-7000
7000-12,000
12,000-35,000
35,000 OR MORE
★ CAMP STATION

Figure I-2. Land use in District of Columbia and vicinity.

GPO 827-234-2

Most of the non-vehicular gaseous pollution results from the combustion of coal, fuel oil, and natural gas for space heating and electric power generation. Of the total energy requirement in the Washington SMSA (other than for transportation) 46 percent is produced from coal, 24 percent from fuel oil, and 30 percent from natural gas.

An estimated 3-1/2 million tons of coal are consumed annually; 79 percent of this total is used by the local electric power utility, 12 percent by the Federal Government in large heating plants, and the remainder for residential space heating, industrial, commercial, and miscellaneous uses. About 26 percent of the total is consumed in one large power plant in Alexandria, Virginia; another 40 percent is used in a power plant at Dickerson, Maryland, more than 30 miles from Washington. Most of the remainder is consumed within the District of Columbia. About 40 percent of the latter is used for space heating by the Federal Government; another 40 percent is used by two of the electric power utility's smaller plants. The remainder of the coal consumed in the District is used for small commercial and industrial boilers and for heating apartment buildings. The sulfur content of the coal used in the area ranges from 0.9 to 3.0 percent, averaging about 1.5 percent.

Approximately 360,000,000 gallons of fuel oil are used each year. About two-thirds of the total is composed of distillate oils used primarily for residential heating; the other third, of residual oils used as heating fuels for government buildings, hotels, apartments. Sulfur content averages about 0.3 percent in the distillate oils, and about 2.8 percent in the residual oils.

Natural gas is the major residential heating fuel; about 63 billion cubic feet of gas burned annually in the Washington metropolitan area.

Seven incinerators and open-burning operations at two large dumps in the metropolitan area dispose of about 2000 tons of dry refuse per day, or about two-thirds of the total in the SMSA. (Wet garbage is not incinerated, but is used as livestock feed.) Pollution from these disposal operations amounts to only a few percent of estimated total gaseous emissions, but most of the emissions and almost all of the complaints are caused by the open-burning dumps, which burn only about one-seventh of the total refuse.

Locations of the major central heating plants, power stations, and incinerators in the metropolitan area are indicated in Figure 1-3. The position of the CAMP station, located on the southeast corner of the intersection of First and L streets, N.W., is also shown.

METEOROLOGY

Pollutant concentrations in the atmosphere depend not only upon the amount of pollution emitted from sources in the community, but also on the extent to which the pollution is diluted or dispersed in the atmosphere. In the Washington area, this dilution depends primarily on meteorology, since topographic influences are minimal.

The extent of dilution and dispersion horizontally is determined primarily by surface wind speed. Table 1-3 summarizes by season for several years the average surface wind speeds* in Washington and the degree of horizontal dilution afforded. In addition, Table 1-3 includes the frequency of winds affording "poor" horizontal dilution, i.e., winds less than 7 mph. The average wind speeds indicate that the gross horizontal dilution in Washington is generally best in winter and spring and poorest in summer. In all seasons the city experiences light winds affording "poor" dilution a significant portion of the time; although much of this time is probably at night, when wind speeds are typically lower, a few occasions of light winds throughout an entire day did occur in each season.

TABLE 1-3
HORIZONTAL DISPERSION CHARACTERISTICS

Season	Average hourly wind speed, mph	Horizontal dilution capacity[a]	Frequency of wind speeds ≤ 7 mph Hourly winds, % of hours	Daily mean winds, days per month
Winter	10,8	Good	35	8-9
Spring	11.0	Good	29	4-5
Summer	8.5	Moderate	43	8-9
Autumn	9,1	Moderate	41	10-11

[a] On a scale of poor, moderate, good, excellent (Reference 9).

The direction in which pollutants are carried by the wind depends, of course, on the wind direction. Figure 1-4 presents seasonal wind roses for the Washington area. In winter, north-

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*All meteorological data used in this report are U.S. Weather Bureau data from Washington National Airport unless otherwise noted.

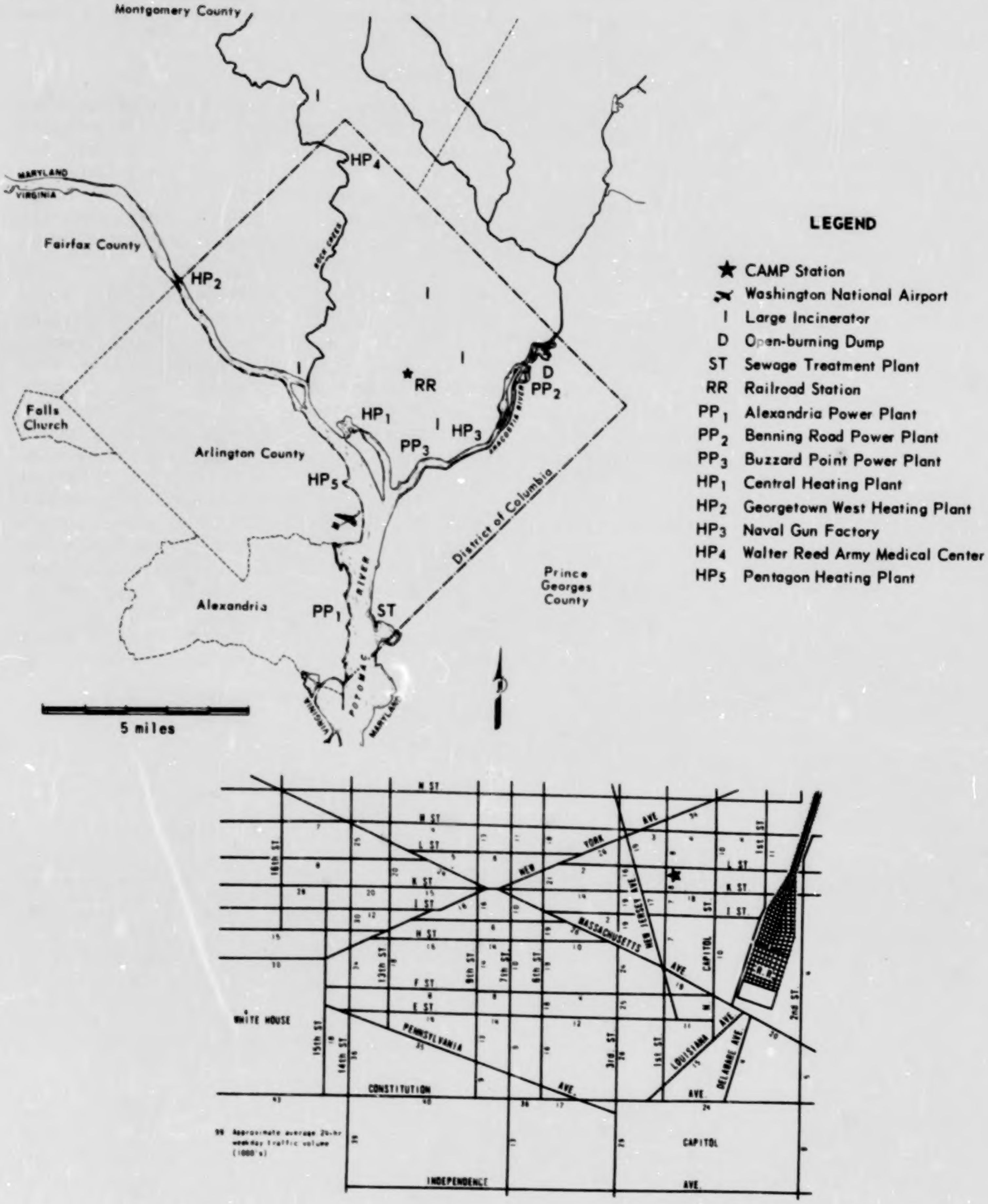
Montgomery County
MARYLAND
VIRGINIA
Fairfax County
Falls Church
Arlington County
Alexandria
Prince Georges County
District of Columbia
ROCK CREEK
ANACOSTIA RIVER
POTOMAC RIVER
HP1
HP2
HP3
HP4
HP5
PP1
PP2
PP3
RR
ST
D
I
5 miles
LEGEND
★ CAMP Station
Washington National Airport
I Large Incinerator
D Open-burning Dump
ST Sewage Treatment Plant
RR Railroad Station
PP1 Alexandria Power Plant
PP2 Benning Road Power Plant
PP3 Buzzard Point Power Plant
HP1 Central Heating Plant
HP2 Georgetown West Heating Plant
HP3 Naval Gun Factory
HP4 Walter Reed Army Medical Center
HP5 Pentagon Heating Plant
N ST
M ST
L ST
K ST
I ST
H ST
F ST
E ST
16th ST
15th ST
14th ST
13th ST
9th ST
7th ST
6th ST
3rd ST
1st ST
2nd ST
NEW YORK AVE
MASSACHUSETTS AVE
NEW JERSEY AVE
CAPITOL ST
PENNSYLVANIA AVE
LOUISIANA AVE
DELAWARE AVE
CONSTITUTION AVE
INDEPENDENCE AVE
WHITE HOUSE
CAPITOL
U.S.R.R.
99 Approximate average 24-hr weekday traffic volume (1000's)

Figure I-3. Location of CAMP station in relation to major pollution sources.

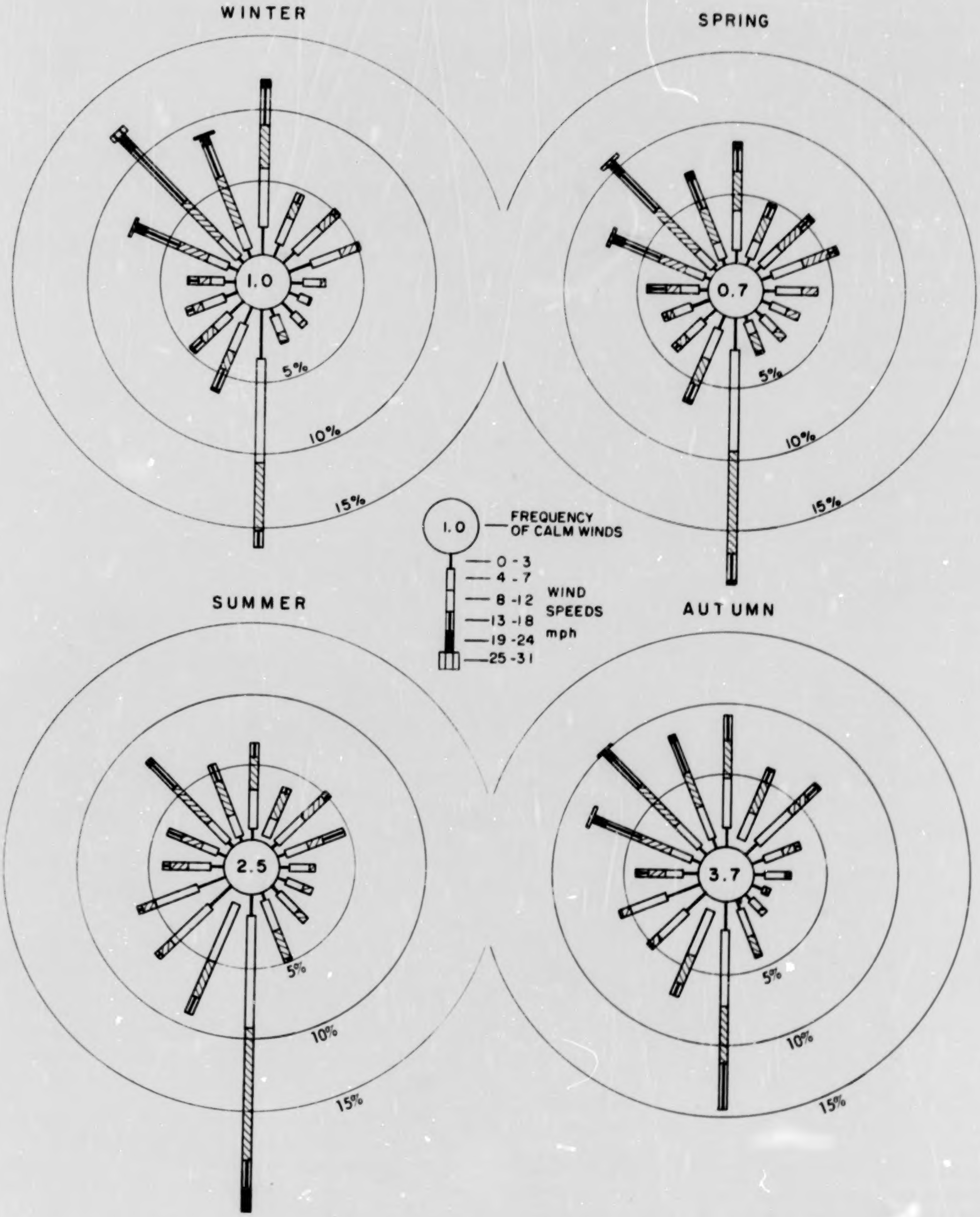

Figure 1-4. Surface wind roses, Washington National Airport, 1962-1963.

west winds are predominant; in summer, southerly winds are predominant. In all seasons, easterly winds are relatively infrequent.

The extent of pollutant dispersion in a vertical direction is determined by the stability of the atmosphere, i.e., the degree of turbulent mixing in the air mass. This stability in turn depends on the temperature gradient in the lowest layer of the atmosphere. If the temperature decreases with altitude at a rate greater than 5.4°C per 1000 feet (the dry adiabatic lapse rate), the atmosphere is unstable and turbulent mixing occurs. If the temperature decrease is less than 5.4°C per 1000 feet, or if the temperature increases with height, the atmosphere is stable and mixing is suppressed.

During the daytime, lowest layers of the atmosphere are typically unstable, the low-lying warm air tends to rise, and the resulting air movement mixes gaseous pollutants vertically throughout the air mass. Under these conditions, the degree of vertical dilution afforded is determined by the depth of the layer in which mixing can occur. This mixing depth is dependent on the vertical temperature profile and is at a maximum in the afternoon. The first 2 columns of Table 1-4 present seasonal averages of the daily maximum mixing depth and the degree of vertical dilution afforded. The average depth available for mixing during autumn and winter is half that available in spring and summer.

TABLE 1-4
VERTICAL MIXING CHARACTERISTICS

Season	Average daily maximum mixing depth,[10] ft	Vertical dilution capacity[a]	Frequency of very stable layer based within 500 feet of the surface,[11] 500 feet 7 am	10 am	7 pm	10 pm
Winter	1320	Poor	48	22	30	44
Spring	3050	Moderate	51	5	12	42
Summer	3880	Good	57	2	5	47
Autumn	1860	Poor	59	8	34	56

[a] On a scale of poor, moderate, good, excellent (Reference 9).

During the nocturnal hours, the earth's surface is cooled as heat radiates away, the decrease in air temperature with height is typically less than during the day, and vertical mixing is correspondingly reduced. Frequently the cooling of the earth after sunset is rapid enough that the temperature gradient becomes inverted, i.e., the lower air becomes cooler than that above. Such a "radiation inversion" is very stable and essentially eliminates any vertical dispersal of pollution until the inversion is dissipated by the warming of the earth in the morning. The last four columns of Table 1-4 indicate the frequency of occurrence of inversion condition at various times during the day. Radiation inversions occur overnight about half the time in all seasons, with slightly greater frequencies in summer and autumn. A more obvious seasonal difference is that nocturnal inversions tend to form earlier in the evening and persist later into the morning during autumn and winter than during spring and summer.

The poorest overall pollutant dilution, considering both horizontal dispersion (Table 1-3) and vertical mixing (Table 1-4), is thus to be expected in autumn, which is characterized by a relatively high frequency both of persistent inversions and of wind speeds below 7 mph. The similar high incidence of light surface winds and low-level inversions during summer is usually compensated for by good afternoon mixing and the longer period each day during which the mixing occurs.

It is also primarily during autumn that an occasional high-pressure system stagnates over some portion of the eastern United States, frequently including the Washington area. The air in such a stagnating weather system is generally subsiding, and is warmed as it descends; this produces a subsidence inversion, which, in contrast to the nocturnal radiation inversions, may not entirely dissipate during daylight hours and may persist for several days. During these periods of atmospheric stagnation, pollutants can accumulate to record levels. A U.S. Weather Bureau program[12] that forecasts such stagnations noted 10 occurrences (for a total of 28 days) over the Washington area during the 3-1/2-year period from mid-1960 through 1963. Figure 1-5 indicates the general pattern of occurrence of these stagnations over the eastern U.S. during this period; Washington has experienced stagnations more frequently than most major eastern urban areas.

Since this discussion of the atmospheric dilution of air pollutants in Washington is based on data from various periods over several years, it should be considered only general. Data from 1962 and 1963 are discussed more specifically in Part 2.

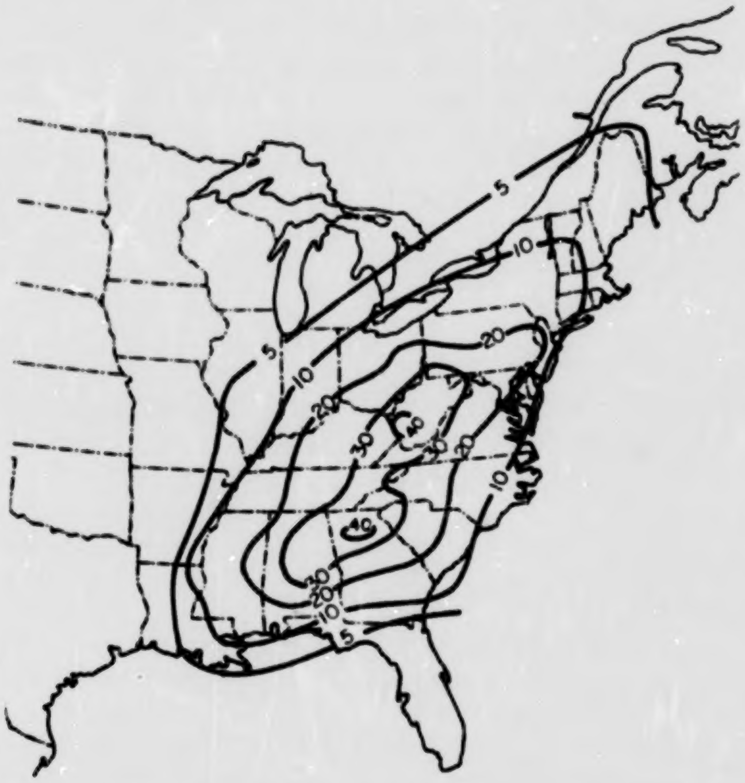

Figure I-5. Number of days of high air pollution potential, August 1960 to December 1963 (as reported by Air Resources Field Research Office, Cincinnati, Ohio).

AIR POLLUTION CONTROL ACTIVITIES*

The existing program for control of air pollution in the District of Columbia has developed over a long period of time. Perhaps the earliest legislation on air pollution was passed in 1875. This early law, still enforced by the District Department of Public Health, covers so-called "public-health nuisances," which are concerned with odors, noxious gases, and dusts resulting from certain natural causes or offensive industrial trades.

In 1935 Congress enacted Public Law 279, the District of Columbia Smoke Law, which prohibits the discharge of dense smoke from any building, any stationary or locomotive engine, motor vehicle, place, or premises within the District of Columbia; the law requires that all ashes, cinders, rubbish, dirt, and refuse be removed to a proper place and that cinders, dust, gas, steam, or offensive or noisome odors shall not be discharged from any building or place to the detriment or annoyance of other persons. Limited modifications and revisions have been made to the smoke law, but for the most part it stands as originally enacted. Since 1936, a smoke control program, through inspection of plans and issuance of permits for fuel-burning equipment, has endeavored to assure that fuel-burning equipment installations would not create frequent nuisances or violations of the smoke law. The smoke law is administered by the District Department of Licenses and Inspection.

Recent amendments to the Traffic and Motor Vehicle Regulations prohibit motor vehicle exhaust emissions darker than Ringleman No. 2. During a required annual inspection of motor vehicles registered in the District, automobiles are checked for excessive exhaust smoke, and vehicles observed to be smoking excessively can be required to appear at an inspection station between annual inspections. The exhaust control ordinance is administered by the District Police Department.

Under Reorganization Plan No. 5 of 1952, the District Department of Public Health was given the responsibility of supervising community activities relating to occupational and environmental health. This responsibility ranges from city planning to investigation of nuisances. A comprehensive program for the control of air pollution under this law has been developed by the Health Department and is awaiting implementation.

In Montgomery and Prince Georges Counties, Maryland, authority for air pollution control is vested in the county health departments and consists primarily of investigation of complaints, with assistance from the state Department of Health when necessary. Neither county has a smoke abatement program, but both have ordinances and regulations establishing performance standards for incinerators. In Montgomery County, open burning of leaves and other combustibles is limited to certain hours of the day. In Prince Georges County, open burning at dumps and sanitary land fills is prohibited.

In Arlington County, Virginia, the limited air pollution activities are administered by the Department of Inspections. These activities are directed primarily toward the inspection and licensing of boilers and incinerators, although county regulations also limit the times when leaves and other combustibles may be burned in the open. Investigation of complaints is the responsibility of the County Health Department.

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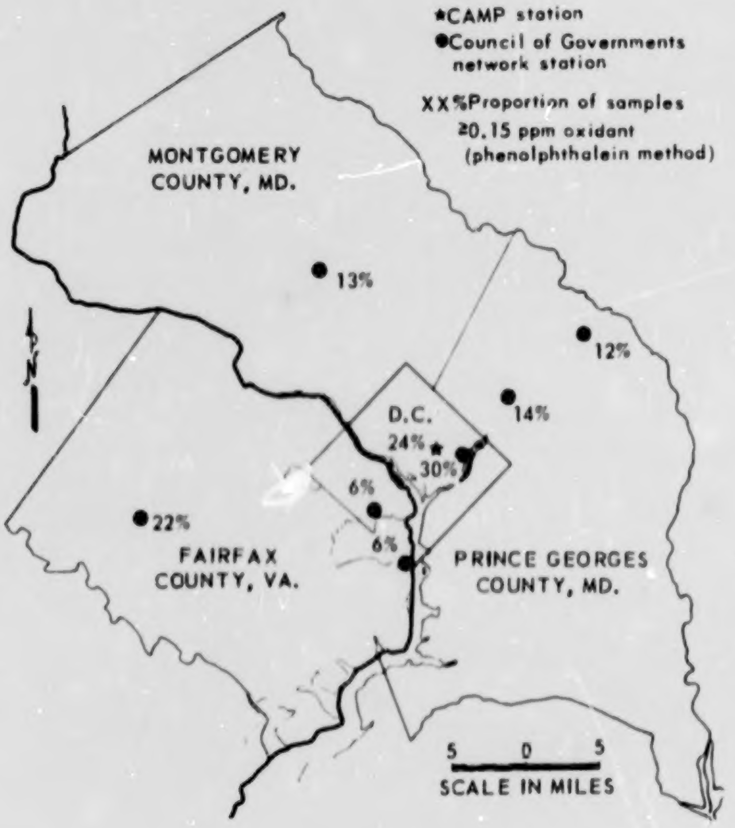
*Control activities are described as they existed during 1962-1963; since that time several local jurisdictions have enacted new regulations, increased their staffs, and otherwise strengthened their control efforts.

In Fairfax County, Virginia, and in the City of Falls Church, air pollution control activities are administered by the County Health Department, with assistance from the state Department of Health. In Alexandria, Virginia, the local health department investigates complaints and makes some limited investigations of specific problems with assistance from the Virginia Department of Health. Smoke abatement activities are the responsibility of the smoke and boiler inspector. Individual backyard incinerators are permitted and private open burning of leaves and other combustibles is allowed, although the burning of construction and demolition wastes is regulated by a permit system.

Following a period in June 1959 during which serious photochemical smog incidents occurred on four consecutive days, the Metropolitan Washington Council of Governments, a voluntary association, established the Automobile Nuisance Abatement Committee. The Committee's task was to supervise the control of unnecessary noise, smoke, and fumes from automotive equipment operated within the metropolitan area. To meet the increasing complexity of the air pollution problem, the Regional Air Pollution Advisory Board has superseded the original Committee. Working through the Council of Governments, this Board advises local officials in the metropolitan area of air pollution problems and proposes corrective measures. Since 1961, the Council of Governments has supported the operation of an area-wide, eight-station oxidant sampling network. Figure 1-6 indicates, for each network station, the proportion of afternoon samples that exceeded 0.15 ppm oxidant (phenolphthalein method).* The downtown CAMP station recorded one of the higher frequencies of such days.

The District Department of Public Health participates in the National Air Sampling Network (NASN), collecting bi-weekly suspended particulate samples on glass-fiber filters with a high-volume sampler. Figure 1-7 presents the annual suspended particulate concentrations in Washington, based on NASN data. Levels in 1963 were about typical for the 6 years; levels in 1962 were the lowest recorded.


★CAMP station
●Council of Governments network station
XX%Proportion of samples ≥0.15 ppm oxidant (phenolphthalein method)
MONTGOMERY COUNTY, MD.
13%
12%
14%
D.C.
24%
30%
6%
6%
22%
FAIRFAX COUNTY, VA.
PRINCE GEORGES COUNTY, MD.
N
5
0
5
SCALE IN MILES

Source: Metropolitan Washington Council of Governments, Reference 13

Figure 1-6. Geographic distribution of high total oxidant levels, October 1961 to September 1963.

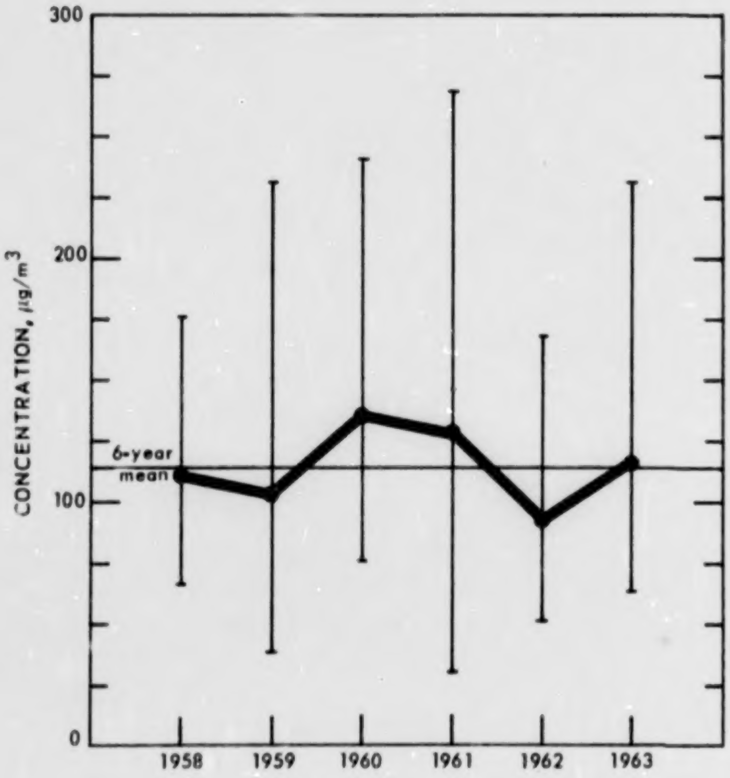


Figure 1-7. Suspended particulate levels (National Air Sampling Network), 1958 - 1963.

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*Equivalent to 0.07 – .08 ppm oxidant by the potassium iodide method used by CAMP.

CAMP STATION SITE

The Washington CAMP Station is located on the southeast corner of the intersection of First and L Streets, N. W., in a fairly dense, older residential-commercial area. During 1962 and 1963 First Street, a major traffic artery, was one-way southbound; 1962 traffic data indicated that about 8000 vehicles passed the station on an average weekday, mostly during the morning traffic peak of inbound vehicles. The only distinct point source of pollution in the immediate vicinity is an elementary school on the southwest corner of the same intersection; school heating and waste disposal activities often produce slight but discernable effects on the pollutant levels recorded at the station.

In an attempt to identify any larger, more distant, sources that exert an influence at the station, the hourly pollutant concentrations occurring with each of the wind directions (including calms) were plotted in terms of percentage of the annual mean concentration of each pollutant. The resulting directional patterns for 1963 are presented in Figure 1-8. Data for several of the pollutants did indeed indicate some directional effect, with high concentrations during hours when the wind was from certain directions. These effects and their possible causes are discussed in Part 2.

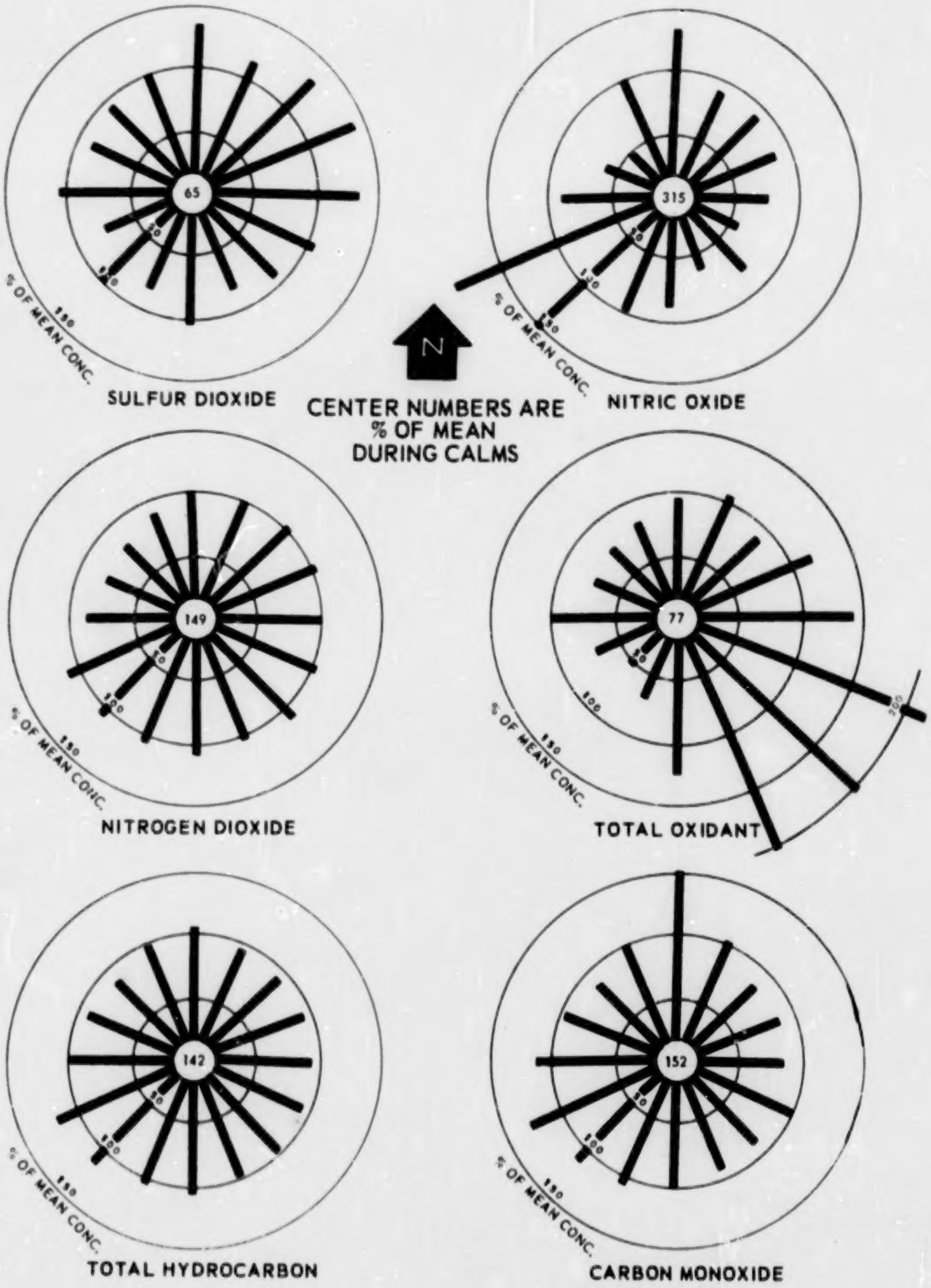

Figure 1-8. Directional patterns of pollutant concentrations, 1963

Continuous
Air
Monitoring
Program

PART 2:
RESULTS AND DISCUSSION

PART 2: RESULTS AND DISCUSSION

SUMMARY OF RESULTS

Pollutant Levels

During 1962 and 1963 the CAMP station in Washington collected over 884,000 valid five-minute measurements[*] of gaseous air pollutant concentrations, 2748 two-hour soiling index values, and 317 twenty-four-hour suspended particulate samples. Table 2-1 summarizes the pollutant levels recorded and lists the periods for which data are available.

Concentrations of the several gaseous pollutants ranged from maximum values 7 to 30 times the mean levels to minima below the sensitivity of the instruments. As is usual with air quality data, most of the values recorded were numerically low; however, significantly high pollutant levels did occur.[†] Sulfur dioxide levels exceeded 0.1 ppm over 15 percent of the time, averaged over 0.25 ppm for an hour or longer 18 times, and on one occasion averaged 0.36 ppm for an 8-hour period. Nitric oxide levels averaged more than 0.25 ppm for an hour or more 51 times, more than 0.50 ppm for an hour or more 10 times, and on one occasion exceeded 1.0 ppm.

Nitrogen dioxide concentrations varied far less widely, reaching a maximum of 0.37 ppm but rarely exceeding 0.10 ppm. Total oxidant levels averaged 0.10 ppm or more for an hour or longer on 29 days during the 2 years and averaged more than 0.15 ppm for an hour or longer on five occasions; the maximum hourly mean was 0.22 ppm and the maximum 5-minute value was 0.25 ppm. Since measurements of total oxidant are subject to a negative interference by sulfur dioxide, these values are probably underestimates (see Appendix A). The maximum total hydrocarbon concentration recorded was 20 ppm, but levels exceeded 5 ppm only about 5 percent of the time. Carbon monoxide levels exceeded 20 ppm for an hour or longer on 30 occasions and once averaged over 35 ppm for 8 hours. The latter incident included 1 hour of values over 40 ppm and a 5-minute maximum of 44 ppm.

Although the higher concentrations constitute only a small portion of the data, they generally represent the bulk of the pollutant dosage[‡] to which the population is exposed. In addition, they are usually not evenly distributed within the data; rather, the highest concentrations, and consequently the greatest portions of the exposure, tend to occur in a relatively few periods of sustained higher levels. For example, of the 883 ppm-hours total sulfur dioxide dosage in the 2 years, 402 ppm-hours, or 46 percent, occurred during winter months. On a shorter time scale, a similar effect can be seen in the period mentioned above (averaging 0.36 ppm for 8 hours), which occurred on February 6, 1963. Although the 8 hours represents only 1.2 percent of the total time during the month, the dosage during this period amounted to over 4 percent of the total exposure for the month.

To quantitate this effect in greater detail, Table 2-2 presents, for one season, the duration of and the dosage included in those periods when the sulfur dioxide levels reached or exceeded 0.13 ppm. (This value was selected to coincide with a comparable analysis for Cincinnati.) Note that both higher exposures and fewer occurrences are associated with the longer events. These longer events account for a disproportionately large amount of exposure to sulfur dioxide; the 11 events that lasted 8 hours or longer included 41 percent of the dosage in 34 percent of the total time that sulfur dioxide was over 0.13 ppm.

Pollutant concentrations in Washington are compared with those recorded at other CAMP cities in Figure 2-1. The levels were generally intermediate among those from the six stations, except for the total oxidant concentrations. The highest of the oxidant levels in Washington were among the highest recorded at any of the stations; these high levels were at least partially due to particularly low levels of sulfur dioxide in summer — the interference with oxidant measurements was not so serious (see Appendix A).

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[*] The basic CAMP data on gaseous pollutants are neither precisely instantaneous atmospheric concentrations nor 5-minute average levels. The measurements represent instantaneous values of the instrument response recorded at 5-minute intervals. Each of these instantaneous values, however, reflects some degree of sample integration resulting from the characteristics of the instrument systems (see Appendix A).

[†] Note also that in terms of mass concentration units, such as $\mu g/m^3$, the values would from 700 to 2600 times larger numerically than the parts per million volume concentration used herein.

[‡] Dosage is defined as the area under the time-concentration curve, in ppm-hours.

TABLE 2-1
AIR POLLUTANT LEVELS[a] AT THE WASHINGTON CAMP STATION, 1962-1963

	Maximum			Arithmetic Mean	Minimum	Period of data	Valid data, %
	5-Minutes	1-Hour	24-Hour				
Sulfur dioxide, ppm	0.56	0.48	0.25	0.051	< 0.005	1962-63	81
Nitric oxide, ppm	1.03	0.87	0.26	0.034	< 0.005	1962-63	75
Nitrogen dioxide, ppm	0.37	0.30	0.09	0.032	< 0.005	1962-63	81
Total oxidant, ppm[b]	0.25	0.22	0.07	0.012	< 0.005	1962-63	77
Total hydrocarbon, ppm	20	17	8	2.1	< 0.5	3/62-12/63	62
Carbon monoxide, ppm	44	41	23	6.3	< 0.5	4/62-12/63	57
Soiling index, COH/1000 ft		7.2(2hr)	4.2	1.49	< 0.05	1963	63
Suspended particulates, $\mu g/m^3$			305	98	36	1963	87

[a] Measurement methods are discussed in Appendix A.

[b] Oxidant data are not corrected for the interference caused by simultaneous sulfur dioxide occurrences (see Appendix A).

TABLE 2-2
DURATION OF AND DOSAGE DURING OCCURRENCES OF SULFUR DIOXIDE LEVELS EQUAL TO OR GREATER THAN 0.13 ppm

Dosage, ppm-hr	Duration					Total
	5 min	10-55 min	1-4 hr	4-8 hr	8 hr	
0.00-0.09	267	169	0	0	0	436
0.10-0.49	0	25	49	0	0	74
0.50-0.99	0	0	8	6	0	14
1.00-1.99	0	0	0	6	5	11
2.00-3.99	0	0	0	0	5	5
4.00	0	0	0	0	1	1
Total	267	194	57	12	11	541

Total dosage 73.66 ppm-hours; total duration 147 hours, 35 minutes.

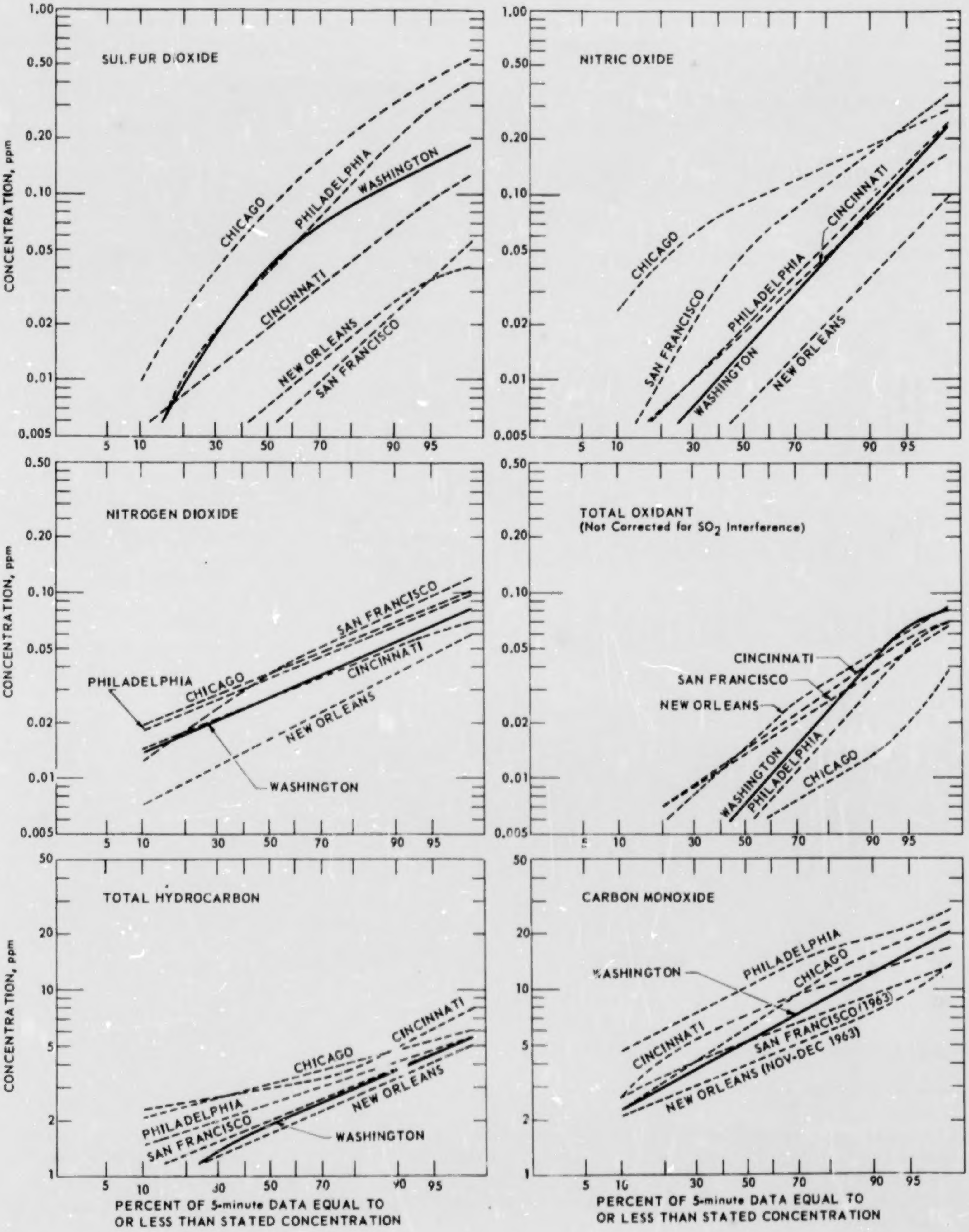

Figure 2-1. Pollutant levels in six CAMP cities, 1962 - 1963.

Variations in Pollutant Levels

The mean pollutant concentrations in Table 2-1 are of little significance without some knowledge of the variations around these levels. Most of the pollutants measured in Washington exhibited significant variability, both long-term seasonal differences and short-term diurnal fluctuations.

Figure 2-2 presents monthly mean levels of the gaseous pollutants as percentages of their respective 2-year mean concentrations.* Levels of sulfur dioxide and nitric oxide exhibited pronounced long-term seasonal cycles, with concentrations an order of magnitude higher in autumn and winter than in summer. Total oxidant levels showed an opposite, but equally obvious, seasonal pattern, due at least in part to changes in sulfur dioxide levels and the attendant interference. Nitrogen dioxide levels were below average during summer 1962 and above average during winter 1962-3, but the difference was slight and was not repeated in 1963. Monthly mean levels of total hydrocarbon and carbon monoxide also varied significantly, but with no obvious seasonal patterns. Total hydrocarbon levels were consistently well below the 2-year mean during summer 1962 but not during summer 1963; carbon monoxide levels exhibited even less semblance of any pattern. Interpreting the values for these pollutants is difficult, however, because the data are relatively sparse.

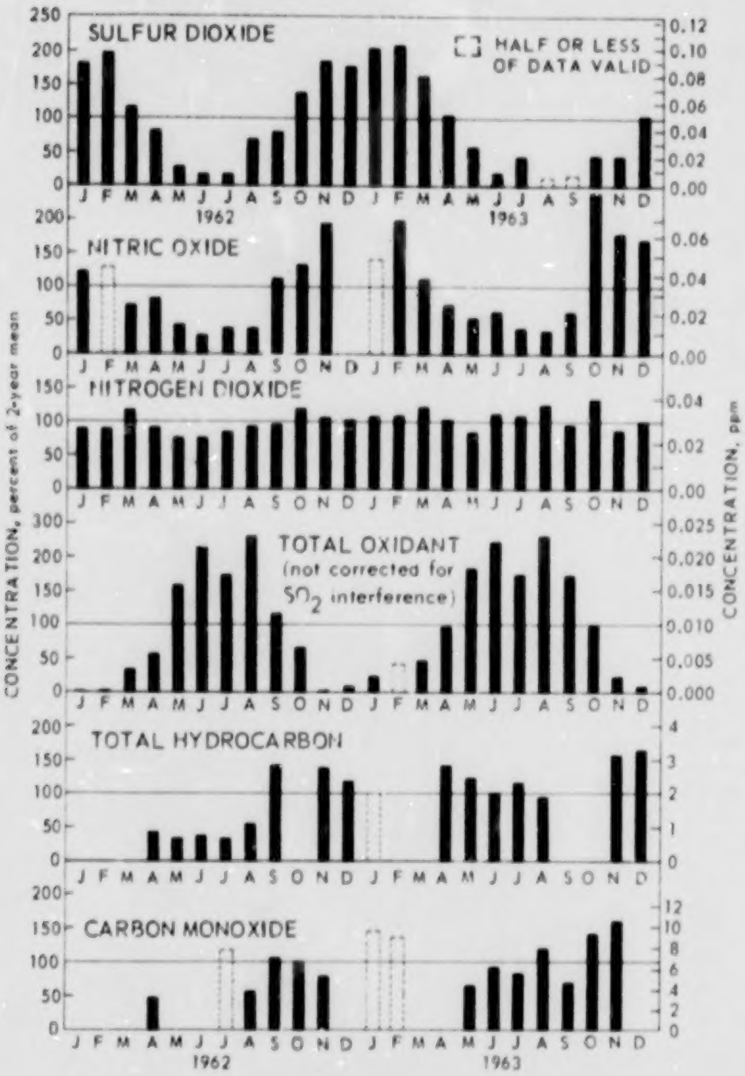

Figure 2-2. Seasonal variation of gaseous pollutant levels.

Levels of each of the pollutants also exhibited short-term diurnal fluctuations, with variations ranging as widely as did the seasonal differences. Figure 2-3 presents the average patterns of diurnal variation. Each bar represents the average, over all the days, of the pollutant concentrations during that hour; these average concentrations are then normalized as percentages of the 2-year mean. Total oxidant levels followed an obvious pattern, nearly an order of magnitude higher in the afternoon than at night; as with the seasonal differences, some of this variation was due to changing levels of sulfur dioxide interference. Although the other pollutants all exhibited patterns with similar shapes — a morning peak, an afternoon minimum, and an evening increase followed by an early-morning low — the magnitudes of the variations differed among the pollutants.

The extent to which the variations of the several pollutants tended to occur together is also of interest; such relationships can be quantitated with correlation coefficients.† To indicate the degree of concurrent seasonal variation, Table 2-3 presents simple correlation coefficients between monthly mean concentrations of various pairs of the pollutants; total hydrocarbons and carbon monoxide are omitted because too few valid monthly averages were available. The correlation of 0.50 between sulfur dioxide and nitric oxide indicates that these two

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The dashed bars in Figure 2-2 and other figures represent invalid data-months, i.e., months for which less than 16 days of component data was valid (see Part 3); as such, they should be considered only semi-quantitative. Missing bars indicate no valid data or only a very few data that are not considered even qualitatively representative of the month.

† The simple correlation coefficient (r) is a measure of the linear dependence between two variables. By mathematical definition, the correlation coefficient can vary from -1 to +1. Two variables that tend toward linear dependency will have a correlation near -1 or +1, while independent variables will have a correlation near zero.

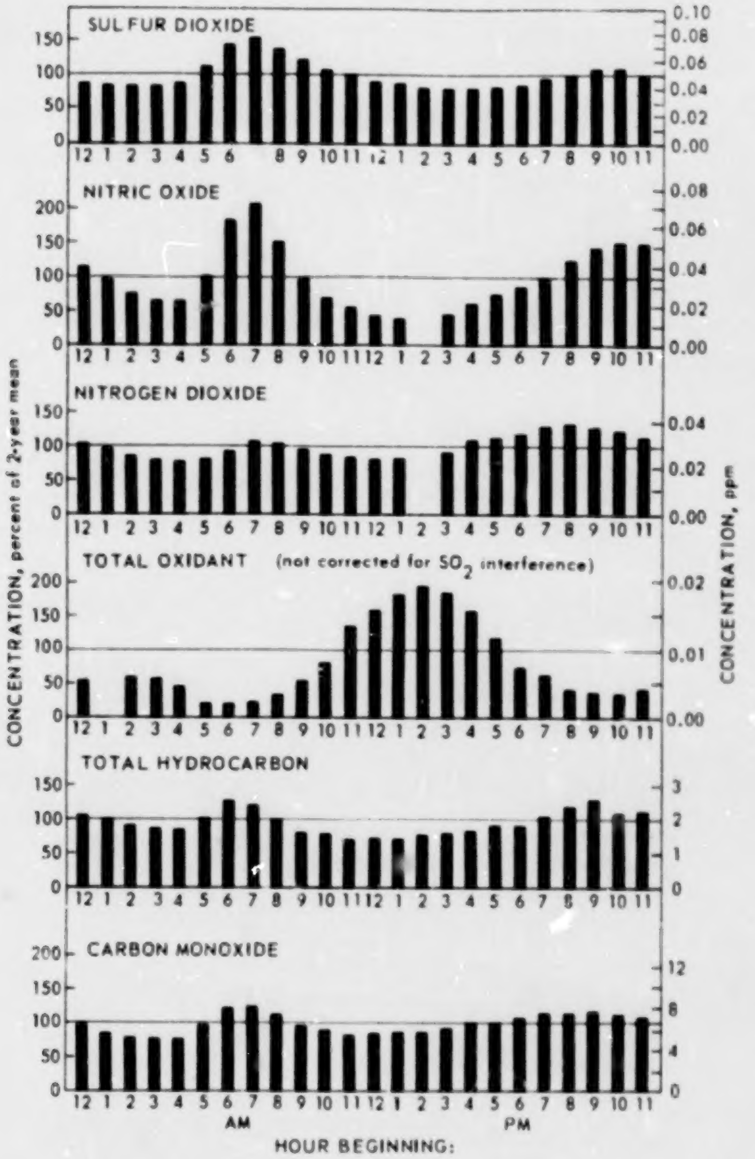

Figure 2-3. Diurnal variation of gaseous pollutant levels.

pollutants generally followed the same seasonal pattern, as is apparent in Figure 2-2. Monthly average total oxidant levels correlated negatively with both nitric oxide (r = -0.67) and sulfur dioxide (r = -0.81); this negative relationship reflects the opposite seasonal pattern shown for total oxidant in Figure 2-2.

To quantitate the degree to which the diurnal variations were concurrent, Table 2-4 presents simple correlation coefficients between hourly mean concentrations of the several pairs of pollutants for summer and winter. No confidence limits are given because each coefficient is based on several hundred concurrent measurements. All the pairs of pollutants, except those involving oxidant, exhibited significantly positive relationships; most of these correlations were higher in winter than in summer. The hourly concentrations of total oxidant were generally uncorrelated with concentrations of any of the other pollutants during winter, and were negatively related to sulfur dioxide and the oxides of nitrogen in summer.

On the basis of the diurnal variation patterns in Figure 2-2 one would expect to find stronger relationships if concentrations of one of the pollutants were compared with concentrations of another at a different time, perhaps one to several hours later.

TABLE 2-3
SIMPLE CORRELATION COEFFICIENTS FOR MONTHLY MEAN CONCENTRATIONS

Pollutants	Coefficient	95% Confidence Limits
SO_2 - NO	+0.50	+0.15 — +0.75
SO_2 - NO_2	+0.18[a]	-0.30 — +0.54
SO_2 - Oxidant	-0.81	-0.92 — -0.60
NO - NO_2	+0.24[a]	-0.18 — +0.59
NO - Oxidant	-0.67	-0.85 — -0.37
NO_2 - Oxidant	-0.17[a]	-0.54 — +0.26

[a] Not significantly different from zero.

TABLE 2-4
SIMPLE CORRELATION COEFFICIENTS FOR HOURLY MEAN CONCENTRATIONS

Pollutants	Winter 1962-3	Summer 1963
SO_2 - NO	+0.50	+0.37
SO_2 - NO_2	+0.18	+0.32
SO_2 - Oxidant	+0.03[a]	-0.19
SO_2 - Hydrocarbon	+0.33	+0.19
SO_2 - CO	+0.67	+0.23
NO - NO_2	+0.55	+0.41
NO - Oxidant	-0.12[a]	-0.39
NO - Hydrocarbon	+0.57	+0.58
NO - CO	+0.65	+0.43
NO_2 - Oxidant	0.00[a]	-0.22
NO_2 - Hydrocarbon	+0.43	+0.46
NO_2 - CO	+0.59	+0.48
Oxidant - Hydrocarbon	-0.13	-0.10[a]
Oxidant - CO	-0.27	-0.12[a]
Hydrocarbon - CO	insufficient data	+0.31

[a] Not significantly different from zero.

THE EFFECTS OF ATMOSPHERIC DILUTION CAPACITY

Both the long-term seasonal differences and the short-term diurnal fluctuations in concentrations of atmospheric pollutants are caused by variations in the rate at which pollutants are emitted into the atmosphere and in the capacity of the atmosphere to dilute and disperse the pollution. Because dilution capacity affects all the pollutants in essentially the same manner, it is discussed separately here before the several pollutants are discussed individually in more detail.

The effects of changes in atmospheric dilution capacity are most apparent in the similarity of several of the diurnal variation patterns in Figure 2-3. The best dilution conditions generally occurred in the afternoon, when the depth of the unstable mixing layer was greatest and wind speeds were highest; thus afternoon levels of all the pollutants but total oxidant were usually minima. In the evening, when the atmosphere was generally stable and winds generally lighter, pollutant emissions were not rapidly dispersed, and atmospheric concentrations increased. These poor dilution conditions continued through the night, and the decrease in pollutant concentrations during the very early morning hours was primarily due to a decrease in emissions. The peak levels in the morning after sunrise resulted partially from the concurrent increase in emissions of most of the pollutants with the start of the day's activities, and partially from the morning "fumigations."* The relative significance of these two causes varies among the pollutants, and is discussed later in greater detail. Total oxidant levels did not follow a pattern similar to those of the other pollutants because the oxidant levels in the atmosphere depend so much upon solar radiation that this effect overshadows differences caused by other factors. The seasonal differences in average pollutant levels caused the magnitude, and to a certain extent the shape, of the diurnal variation patterns to change from season to season, as seen in Figure 2-4.

The general features of the patterns, as determined by the daily cycles of dilution capacity, sunlight, and emission strength, remained consistent in all seasons.

The long-term seasonal differences in atmospheric dilution capacity of course affected pollutant levels just as did the diurnal fluctuations; however, the effects cannot be readily discerned in Figure 2-2 because of the overriding seasonal variations in emissions. The expected effects can be partially defined, on a relative basis, by meteorological variables. The surface wind speeds and maximum mixing depths during 1962 and 1963 are summarized in Table 2-5; these summaries indicate that daytime dispersion and dilution capacity were above-average in 1962 and 1963, particularly in the summer months (compare with Tables 1-3 and 1-4).

TABLE 2-5
MONTHLY MEAN DILUTION AND DISPERSION DATA

Month	Average surface wind speed, mph	Horizontal dispersion afforded[a]	Average maximum depth of mixing layer, ft	Horizontal dispersion afforded[a]
1962				
Jan	8.8	Moderate	3200	Moderate
Feb	7.9	Moderate	2400	Poor
March	10.2	Good	5000	Excellent
April	8.9	Moderate	6400	Excellent
May	7.5	Moderate	5000	Excellent
June	6.8	Poor	5000	Excellent
July	7.4	Moderate	5900	Excellent
Aug	7.5	Moderate	b	b
Sept	7.0	Poor	4920	Good
Oct	7.2	Moderate	4850	Good
Nov	8.4	Moderate	3100	Moderate
Dec	8.9	Moderate	b	b
1963				
Jan	7.7	Moderate	2730	Moderate
Feb	9.0	Moderate	3520	Moderate
March	8.7	Moderate	3800	Good
April	9.9	Moderate	6400	Excellent
May	8.2	Moderate	6050	Excellent
June	7.3	Moderate	5850	Excellent
July	8.1	Moderate	7100	Excellent
Aug	8.2	Moderate	6550	Excellent
Sept	8.9	Moderate	4720	Good
Oct	7.5	Moderate	4270	Good
Nov	9.9	Moderate	3950	Good
Dec	8.6	Moderate	3650	Moderate

[a] On a scale of poor, moderate, good, excellent (Reference 9).
[b] Not available.

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*Fumigation results when pollutants emitted aloft from elevated sources accumulate in a low-level inversion layer overnight and are then brought to ground level briefly when the inversion is dissipated in the morning.

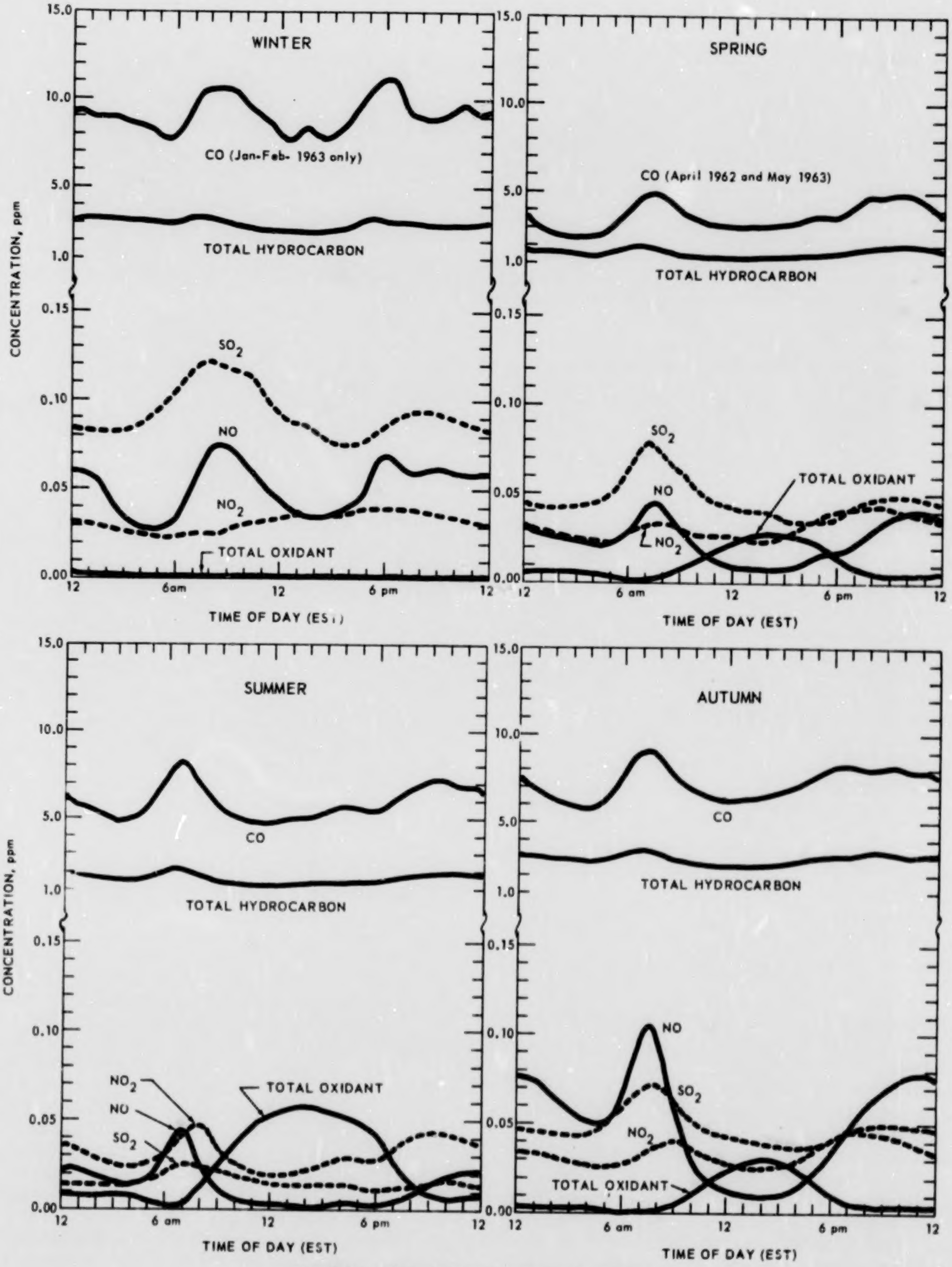


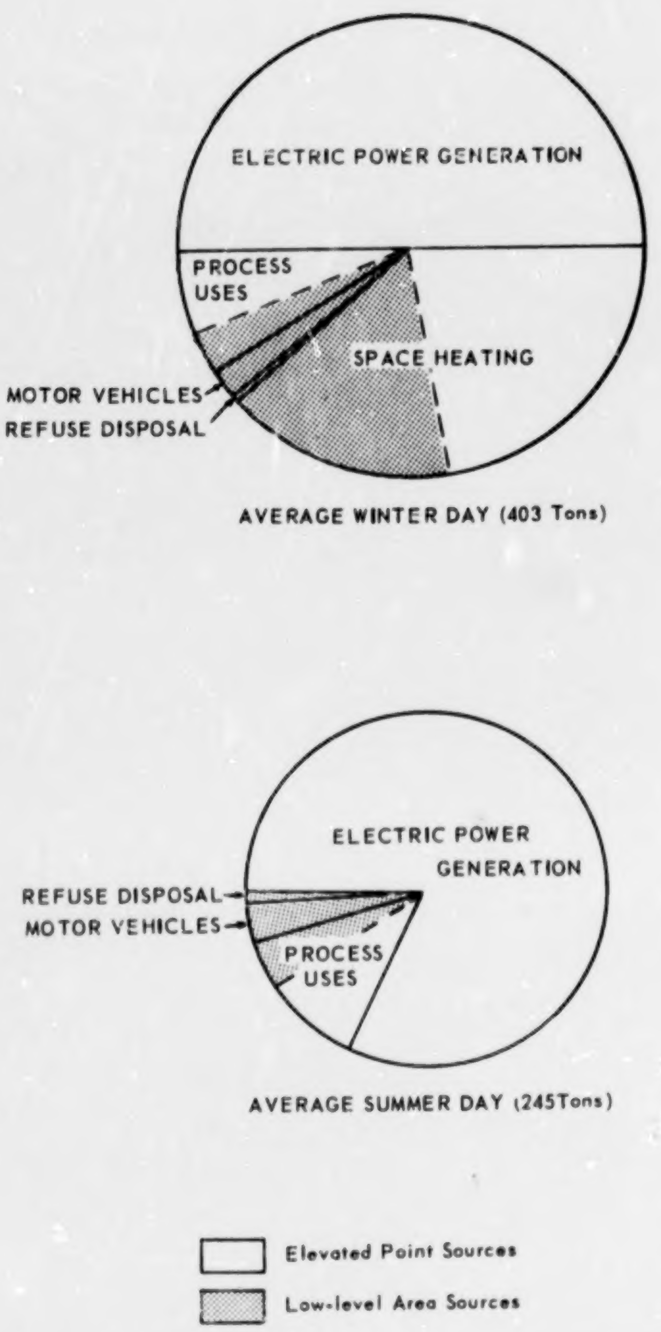
Figure 2-4. Diurnal variation patterns by season.

Although the effect of atmospheric dilution capacity on pollutants levels is generally the same for all pollutants, most of the other factors influencing atmospheric pollutant concentrations, particularly the nature of and variations in sources, affect the several pollutants quite differently. For this reason, the following detailed discussion of the data considers each pollutant or group of pollutants separately.

Sulfur Dioxide

Sulfur dioxide pollution in the Washington area results almost exclusively from the combustion of sulfur-bearing fossil fuels, particularly coal and fuel oil. Estimates of emissions of sulfur dioxide from the several combustion sources are presented in Figure 2-5.

The majority of these emissions originate from elevated stacks at the large heating installations and power plants, most of which are south of the CAMP station (Figure 1-3). There is no evidence, however, that emissions from any one of these large fuel users unduly influenced sulfur dioxide levels at the station; in fact, directional patterns of 1963 hourly concentrations, shown as percent of seasonal mean concentration (Figure 2-6), indicate that levels were generally higher with winds from the north and east. This effect may represent emissions from nearby residential areas or the industrial area to the northeast; it may be merely a coincidence, with frequent northeast winds during the morning peak levels; or it may indicate that such winds are preferentially associated with unusually cold weather systems and associated increased fuel use. Note also in Figure 2-6 that the highest average levels were associated with calm winds only during the summer; this effect indicates that the higher sulfur dioxide levels generally result from emissions brought to the station by the wind, rather than being associated with poor horizontal dispersal of emissions from nearby sources.

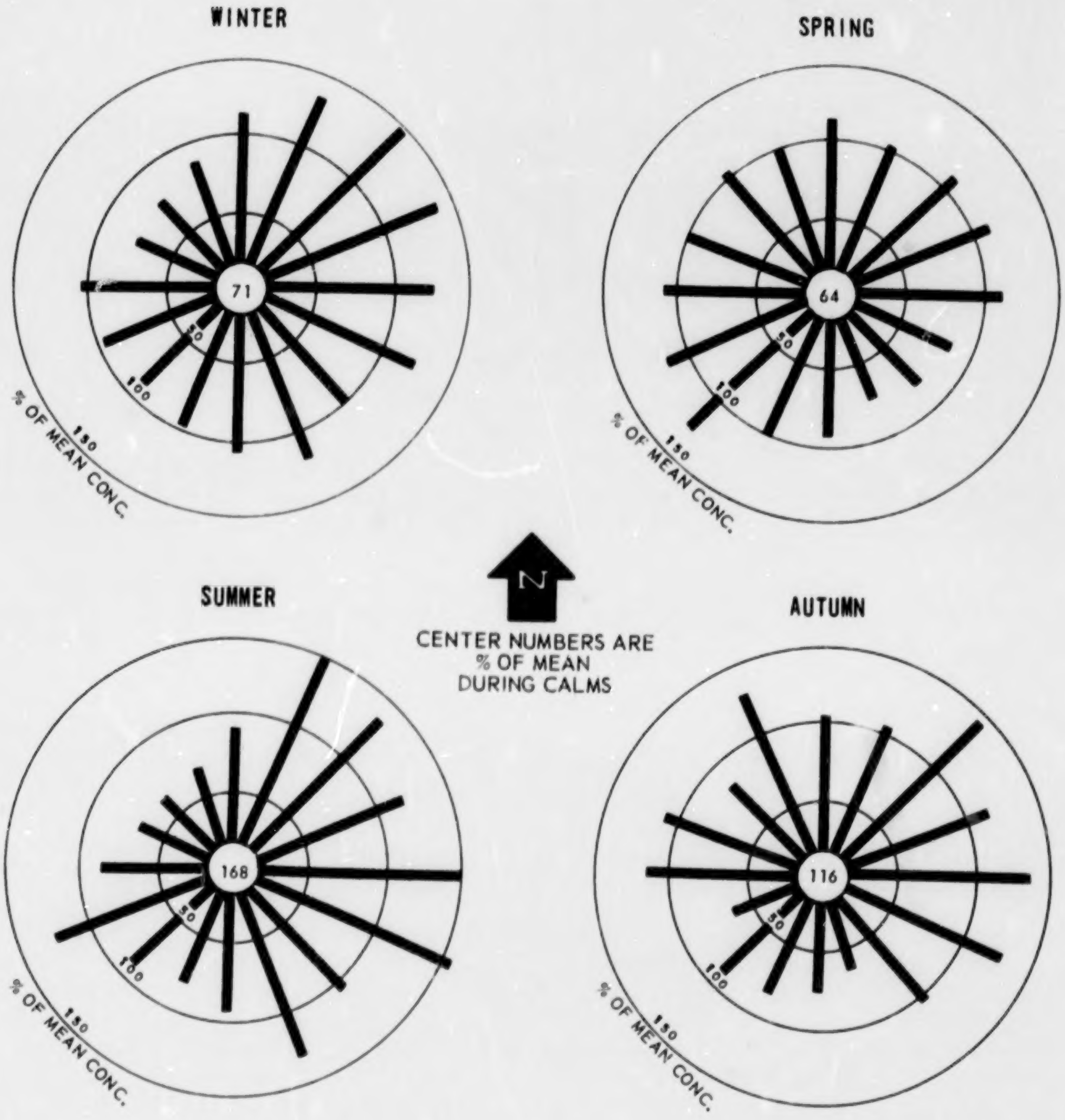


AVERAGE WINTER DAY (403 Tons)

AVERAGE SUMMER DAY (245Tons)

Figure 2-5. Estimated sulfur dioxide emissions from various sources.

Sulfur dioxide sources can be divided into two general categories depending on the variability of their emissions throughout the year. In one category, including electric power generation, use of fuel in commercial and industrial processes, and vehicular exhaust, the emissions vary little from season to season; in the second category, the use of fuels for domestic, commercial, and industrial space heating follows a distinct seasonal pattern, as do the corresponding emissions. Figure 2-7 presents monthly mean sulfur dioxide concentrations superimposed on a pattern of estimated sulfur dioxide emissions. The flat bar across the bottom of the emission pattern represents the mean sulfur dioxide level during the 5 summer months in which concentrations averaged below 0.01 ppm, and is used as an approximation of the level produced by the relatively constant portion of emissions from electric power generation, industrial, commercial, and vehicular sources. The upper area of the emission pattern represents the distribution of monthly average heating demand (assumed proportional to degree-days, base 65° F) normalized to a scale such that the mean of the emission pattern coincides with the mean sulfur dioxide level. The differences between the



SEASON	NUMBER OF VALID HOURS REPRESENTED																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
WINTER	183	53	77	55	34	24	48	52	368	105	66	55	78	154	265	178	42
SPRING	122	74	89	81	77	54	62	88	405	128	95	50	73	164	232	111	28
SUMMER	87	61	83	33	32	33	57	94	304	150	113	117	77	109	198	114	89
AUTUMN	79	61	75	52	26	22	28	79	213	124	78	90	48	127	114	119	94
TOTAL	471	249	324	221	169	133	195	313	1290	507	352	312	276	554	809	522	253

Figure 2-6. Directional patterns of sulfur dioxide concentrations, 1963.

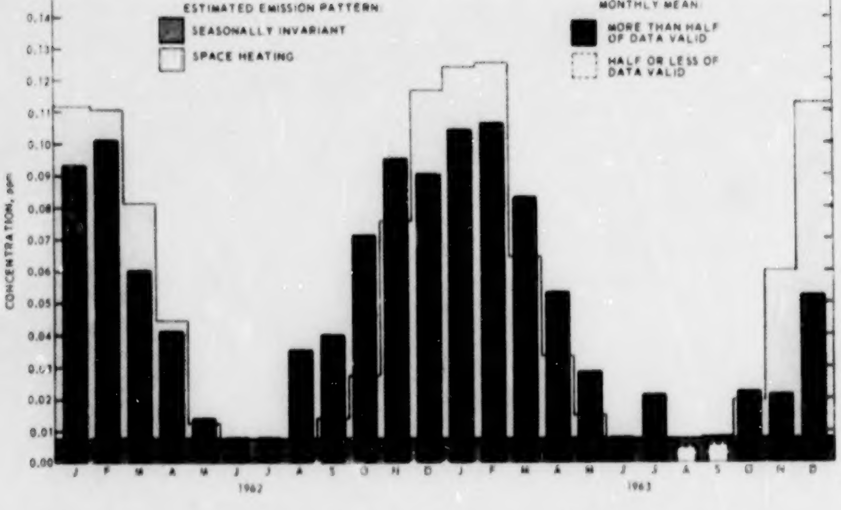


Figure 2-7. Comparison of monthly mean sulfur dioxide concentrations with estimated emission pattern.

pattern of bars representing atmospheric sulfur dioxide levels and the pattern of emissions in the background thus roughly approximate the influence of variation in the atmospheric dilution capacity, within the limits of the assumptions made about emissions. Efforts to relate these differences to meteorological parameters were unsuccessful because of a lack of sufficiently detailed data on vertical temperature gradients. Figure 2-7 does indicate, however, that with sulfur dioxide the seasonal changes in emission rates influenced pollutant levels more significantly than did seasonal differences in meteorological factors.

An attempt to weigh the relative significance of emission rates versus meteorological factors with respect to short-term fluctuations in pollutant concentrations can be made by inspecting diurnal variation patterns, such as the seasonal patterns in Figure 2-8. These indicate the previously noted large seasonal differences in levels; the shapes of the patterns, however, were all similar, following the general pattern shown for all the pollutants in Figure 2-3 and 2-4. The spring and autumn patterns in particular were strikingly similar, as might be expected during these transitional seasons. The differences between afternoon and evening levels were largely due to the difference in atmospheric dilution capacity, while the decline in each pattern after 10 p.m. was presumably due to decreasing home heating and electric power demand.

The causes of the morning peak levels in each diurnal pattern are of particular interest, since these levels were generally the highest for the day; however, the relative significance of morning increases in source strength and of fumigations in causing these peaks is not obvious. Some evidence that both are involved is offered by Figure 2-9, which presents average patterns of diurnal variations on weekdays and on Sundays. The sulfur dioxide pattern on Sundays exhibits

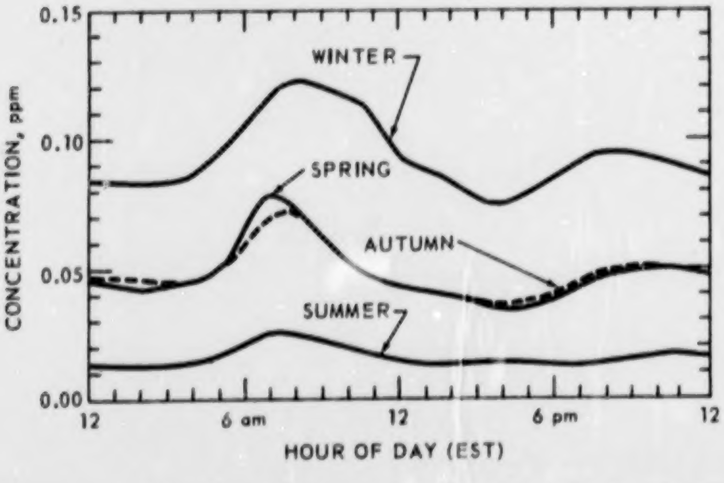


Figure 2-8. Diurnal variation of sulfur dioxide levels by season.

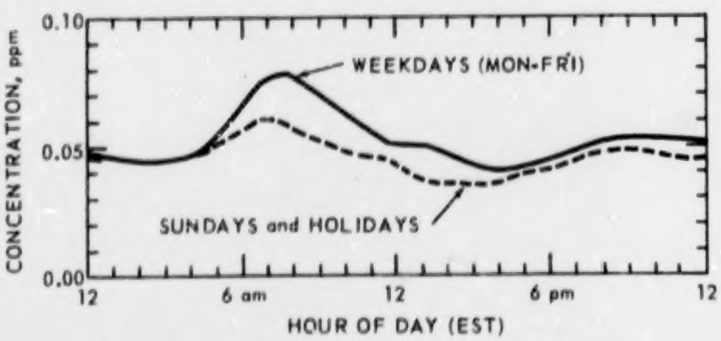


Figure 2-9. Diurnal variation of sulfur dioxide levels on weekdays and Sundays.

a distinctly lower and flatter peak than the pattern for weekdays. Neither the meteorological conditions producing the fumigation phenomenon nor the overnight sulfur dioxide emissions that contribute to it would be expected to exhibit any particular variation through the week; the differences in Figure 2-9 thus indicate some difference in morning sulfur dioxide emissions, presumably the lack of space heating in office and commercial buildings and the lessened electric power demands on Sundays. On the other hand, the typical morning peak is not completely absent from the Sunday pattern, an indication that fumigations are at least partially responsible.

Frequency distributions provide a more statistically quantitative manner of studying the variability of pollutant levels. Frequency distributions* of the 5-minute sulfur dioxide data by month, season, and year are presented in Table 2-6, and the 2-year distribution is plotted with the high and low seasons and the high and low months in Figure 2-10. The seasonal difference in sulfur dioxide levels is quantitated dramatically in Figure 2-10; in the winter of 1962-1963, nearly 90 percent of the 5-minute values equalled or exceeded 0.05 ppm, a value exceeded by only 6 percent of the summer 1963 data. The near-identity of the curves for the highest month and highest season reflects the relative uniformity of pollutant levels during the winter.

Table 2-6 also includes frequency distributions of sulfur dioxide concentrations averaged over various periods longer than 5 minutes. There is no difference among these distributions (except for the several maxima) until the averaging time exceeds 1 hour. The fact that the 5-minute and 10-minute distributions are identical reflects only the 10-minute averaging time of the instrument (see Appendix A); the identity of the 5-minute and 1-hour distributions, however, indicates that sulfur dioxide levels in Washington do not generally fluctuate widely within a short time interval, but vary gradually over periods of several hours.

The highest hourly average (0.48 ppm) was nearly as high as the maximum 5-minute value (0.56 ppm), but about twice the highest daily mean (0.25 ppm). These maxima were all recorded during the morning and early afternoon of February 6, 1963 (see Table 3-15). These unusually high levels appear to have resulted from a combination of increased emissions from space heating (the temperature averaged 35° F from 3 p.m. on February 5th through 3 p.m. on the 6th) and severely limited atmospheric dilution capacity (wind speeds on the 6th averaged only 2.9 mph and the 7 a.m. sounding indicated a temperature inversion that limited mixing to the lowest 200 to 300 feet of the atmosphere). The presumably high emissions of sulfur dioxide into such a limited volume of air were no doubt responsible for the record peak. These conditions were associated with low-pressure weather systems moving past the Washington area from the south, and with a weak high-pressure system to the north, producing light northerly winds. Weather Bureau observers reported smoke and haze throughout most of the day.

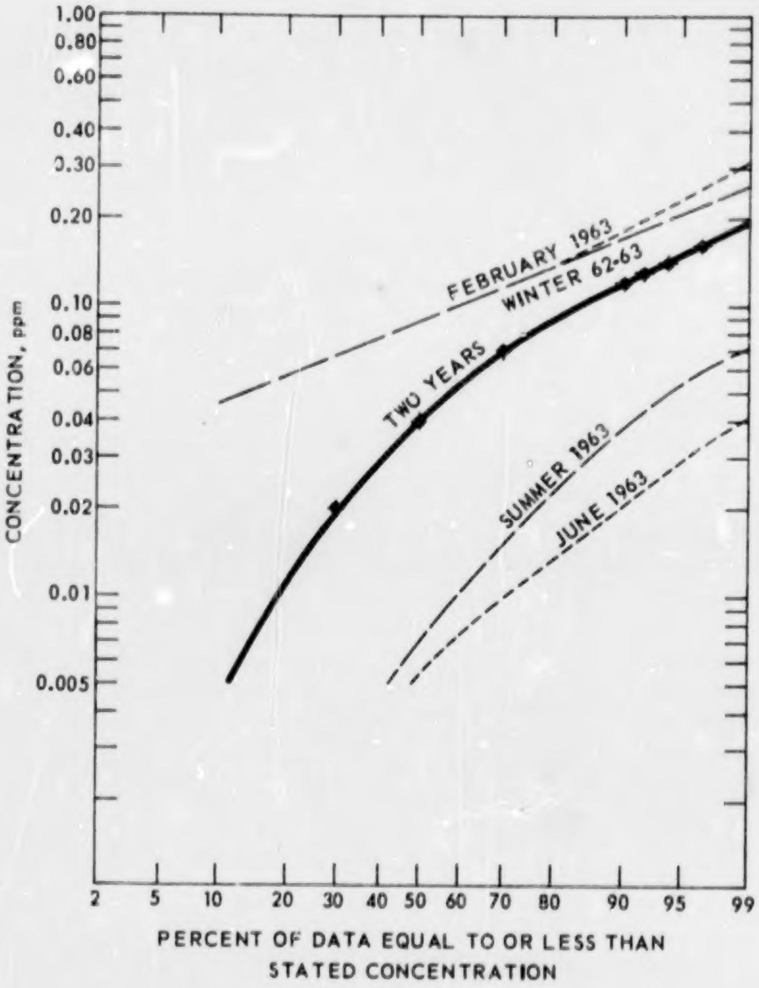


Figure 2-10. Frequency distributions of 5-minute sulfur dioxide data.

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*The interpretation of frequency distributions and their application to CAMP data are discussed in Appendix A.

TABLE 2-6
FREQUENCY DISTRIBUTIONS OF SULFUR DIOXIDE DATA

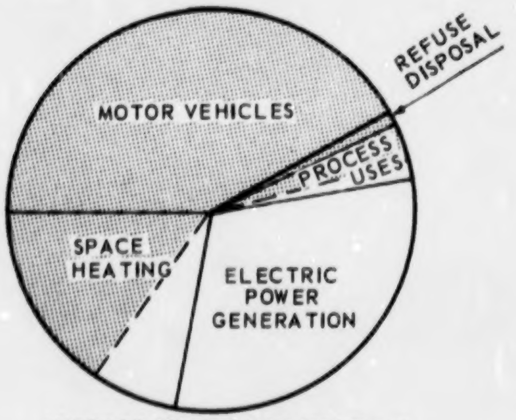
	Avg'g time	Percent of data valid	Concentration, ppm											
				Frequency distribution, %									Max	Arith mean
			Min	10	30	50	70	90	92	94	96	98		
Jan 1962	5 min	87.2	0.00	0.05	0.07	0.09	0.11	0.15	0.15	0.16	0.17	0.20	0.39	0.093
Feb 1962		73.5	0.00	0.05	0.07	0.10	0.13	0.17	0.18	0.19	0.20	0.22	0.35	0.101
Mar 1962		88.6	0.01	0.02	0.04	0.05	0.07	0.11	0.12	0.13	0.14	0.16	0.29	0.060
Apr 1962		91.0	0.00	0.01	0.02	0.04	0.05	0.07	0.08	0.09	0.10	0.12	0.25	0.041
May 1962		76.8	0.00	0.00	0.00	0.01	0.01	0.03	0.03	0.04	0.04	0.05	0.15	0.014
Jun 1962		79.2	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.03	0.04	0.11	0.008
Jul 1962		62.6	0.00	0.00	0.00	0.01	0.01	0.02	0.03	0.03	0.03	0.04	0.11	0.008
Aug 1962		90.0	0.00	0.01	0.03	0.03	0.04	0.05	0.06	0.06	0.07	0.08	0.30	0.035
Sep 1962		91.9	0.00	0.02	0.03	0.04	0.05	0.07	0.07	0.08	0.09	0.10	0.33	0.040
Oct 1962		94.7	0.00	0.04	0.05	0.07	0.08	0.11	0.11	0.12	0.13	0.15	0.25	0.071
Nov 1962		87.4	0.00	0.04	0.07	0.09	0.11	0.16	0.17	0.18	0.20	0.23	0.42	0.095
Dec 1962		64.7	0.02	0.04	0.06	0.08	0.11	0.15	0.16	0.17	0.19	0.22	0.56	0.090
Year 1962	5 min	82.3	0.00	0.00	0.02	0.04	0.07	0.12	0.13	0.14	0.15	0.18	0.56	0.055
Jan 1962	5 min	90.3	0.01	0.05	0.07	0.09	0.12	0.17	0.18	0.19	0.20	0.24	0.40	0.104
Feb 1962		97.6	0.01	0.05	0.07	0.09	0.11	0.19	0.20	0.22	0.25	0.30	0.56	0.106
Mar 1962		97.9	0.02	0.04	0.06	0.07	0.09	0.14	0.15	0.16	0.18	0.20	0.38	0.083
Apr 1962		77.7	0.01	0.03	0.04	0.05	0.06	0.09	0.09	0.10	0.11	0.12	0.26	0.053
May 1962		87.3	0.00	0.00	0.01	0.02	0.03	0.06	0.07	0.08	0.10	0.14	0.45	0.028
Jun 1962		96.9	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.15	0.008
Jul 1962		94.6	0.00	0.00	0.01	0.01	0.03	0.05	0.06	0.06	0.07	0.08	0.20	0.021
Aug 1962		47.0	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.04	0.05	0.13	a
Sep 1962		26.3	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.02	0.03	0.08	a
Oct 1962		84.3	0.00	0.00	0.01	0.01	0.02	0.05	0.06	0.07	0.08	0.10	0.31	0.022
Nov 1962		84.4	0.00	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.08	0.10	0.021
Dec 1962		68.2	0.00	0.00	0.01	0.02	0.06	0.15	0.16	0.18	0.20	0.23	0.50	0.052
Year 1963	5 min	79.3	0.00	0.00	0.01	0.03	0.06	0.11	0.12	0.14	0.16	0.19	0.56	0.046
Two years 1962-1963	5 min	80.8	0.00	0.00	0.02	0.04	0.07	0.12	0.13	0.14	0.16	0.19	0.56	0.051
	10 min		0.00	0.00	0.02	0.04	0.07	0.12	0.13	0.14	0.16	0.19	0.56	
	30 min		0.00	0.00	0.02	0.04	0.07	0.12	0.13	0.14	0.15	0.19	0.52	
	1 hr		0.00	0.00	0.02	0.04	0.07	0.12	0.13	0.14	0.15	0.19	0.48	
	4 hr		0.00	0.00	0.02	0.04	0.07	0.11	0.12	0.13	0.15	0.17	0.41	
	12 hr		0.00	0.00	0.02	0.04	0.07	0.11	0.12	0.13	0.14	0.16	0.28	
	24 hr		0.00	0.00	0.02	0.04	0.07	0.11	0.12	0.12	0.13	0.15	0.25	
Spring 1962	5 min	85.4	0.00	0.00	0.01	0.03	0.05	0.08	0.09	0.10	0.11	0.14	0.29	0.040
Summer 1962		77.2	0.00	0.00	0.01	0.01	0.03	0.04	0.05	0.05	0.06	0.06	0.30	0.019
Autumn 1962		91.4	0.00	0.03	0.04	0.06	0.08	0.12	0.13	0.14	0.16	0.19	0.42	0.068
Winter 1962 1963		83.7	0.01	0.05	0.07	0.09	0.12	0.17	0.18	0.19	0.22	0.26	0.56	0.101
Spring 1963		87.7	0.00	0.01	0.03	0.05	0.07	0.11	0.12	0.13	0.15	0.17	0.45	0.056
Summer 1963		79.3	0.00	0.00	0.00	0.01	0.01	0.04	0.04	0.05	0.06	0.07	0.20	0.013
Autumn 1963		65.2	0.00	0.00	0.01	0.01	0.02	0.04	0.05	0.05	0.07	0.09	0.31	0.019

[a] Mean not computed because of insufficient valid data.

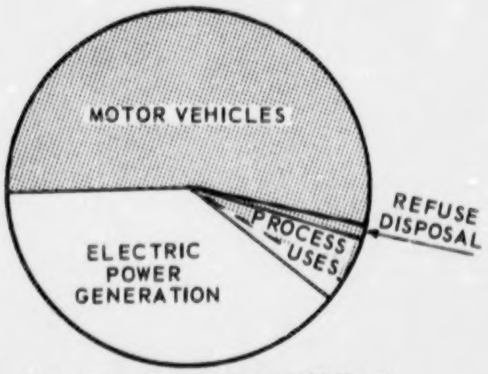
Oxides of Nitrogen

Nitric oxide and nitrogen dioxide are produced by any high-temperature combustion process in which air is an oxygen source. Such processes include the combustion of petroleum fuels for transportation and of fuels for space heating or for industrial and commercial purposes. Because of the heavy traffic density and minimal industrial activity, vehicular emissions are the major source of oxides of nitrogen in Washington (see Figure 2-11).

The directional patterns of nitric oxide concentrations for 1963, Figure 2-12, indicate highest levels from the northeast in winter, similar to the slight effect seen in sulfur dioxide levels, and from the west southwest predominantly in other seasons. It is not apparent whether these effects were due to particular concentrations of pollutant sources in these directions, or to generally lighter winds from these directions. The highest nitric oxide levels were recorded during hours of calm and result from the accumulation of low-level, disperse emissions from vehicles during periods of poor horizontal dilution. Distinctly higher levels also were recorded with autumn winds from the north and north-northwest; these were the result of northerly winds during a period of high nitric oxide concentrations occasioned by an atmospheric stagnation in October 1963. The directional patterns of nitrogen dioxide in Figure 2-13 indicate no distinct and consistent effects.



AVERAGE WINTER DAY (254 Tons)



AVERAGE SUMMER DAY (198 Tons)

☐ Elevated Point Sources

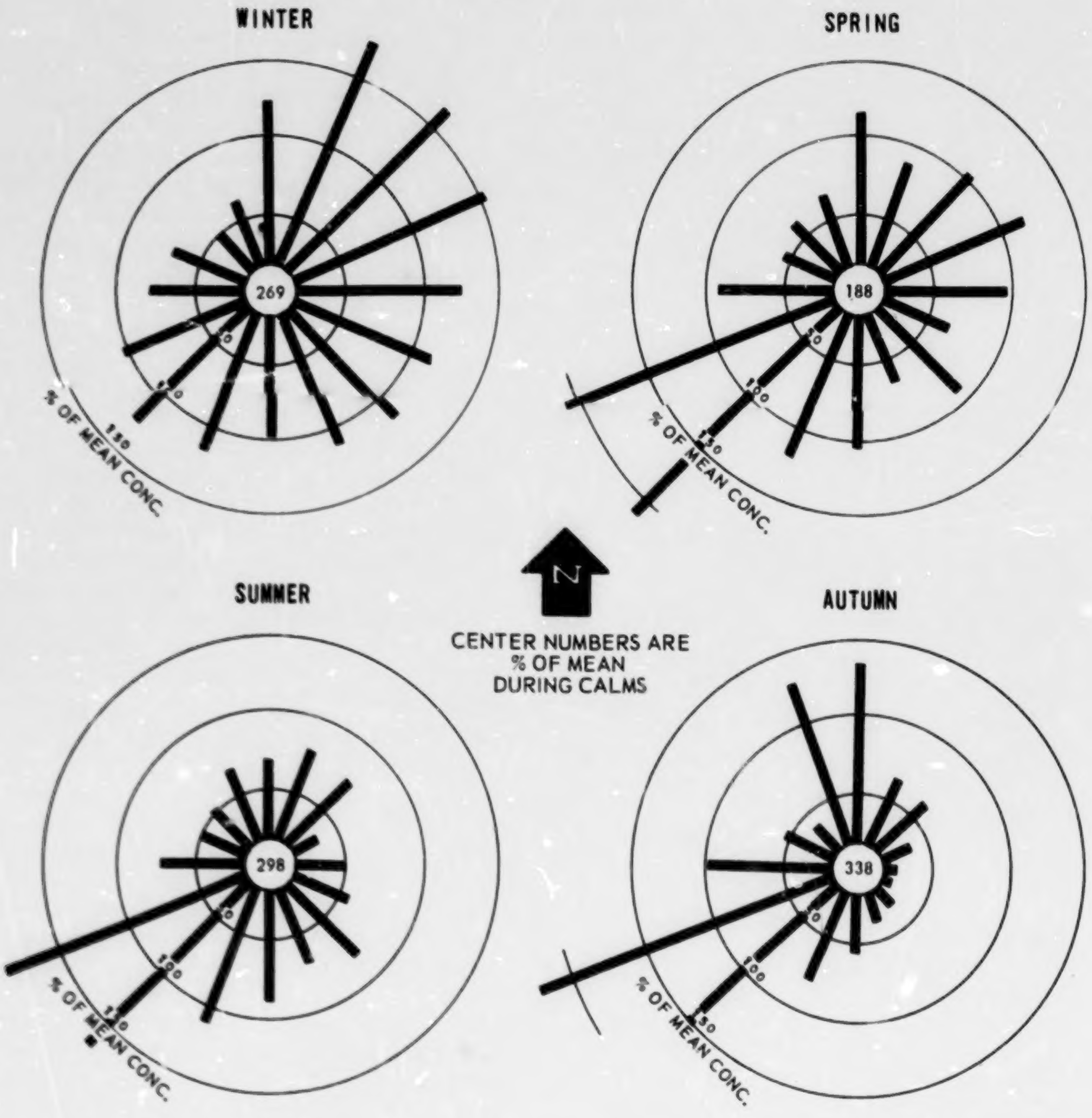
▨ Low-level Area Sources

Figure 2-11. Estimated oxides of nitrogen emissions from various sources.

An estimated emission pattern for oxides of nitrogen, constructed in a manner similar to that for sulfur dioxide, is presented in Figure 2-14; the bars represent the sums of the monthly mean nitric oxide and nitrogen dioxide concentrations actually recorded. The estimated emission pattern in the background represents concentrations resulting from electric power demand and vehicular fuel consumption, which vary only slightly throughout the year, and from heating fuel consumption, which of course follows a seasonal pattern. The atmospheric levels generally followed the emission pattern; the differences, presumed to represent the variation in atmospheric dilution, are similar to those for sulfur dioxide (Figure 2-7).

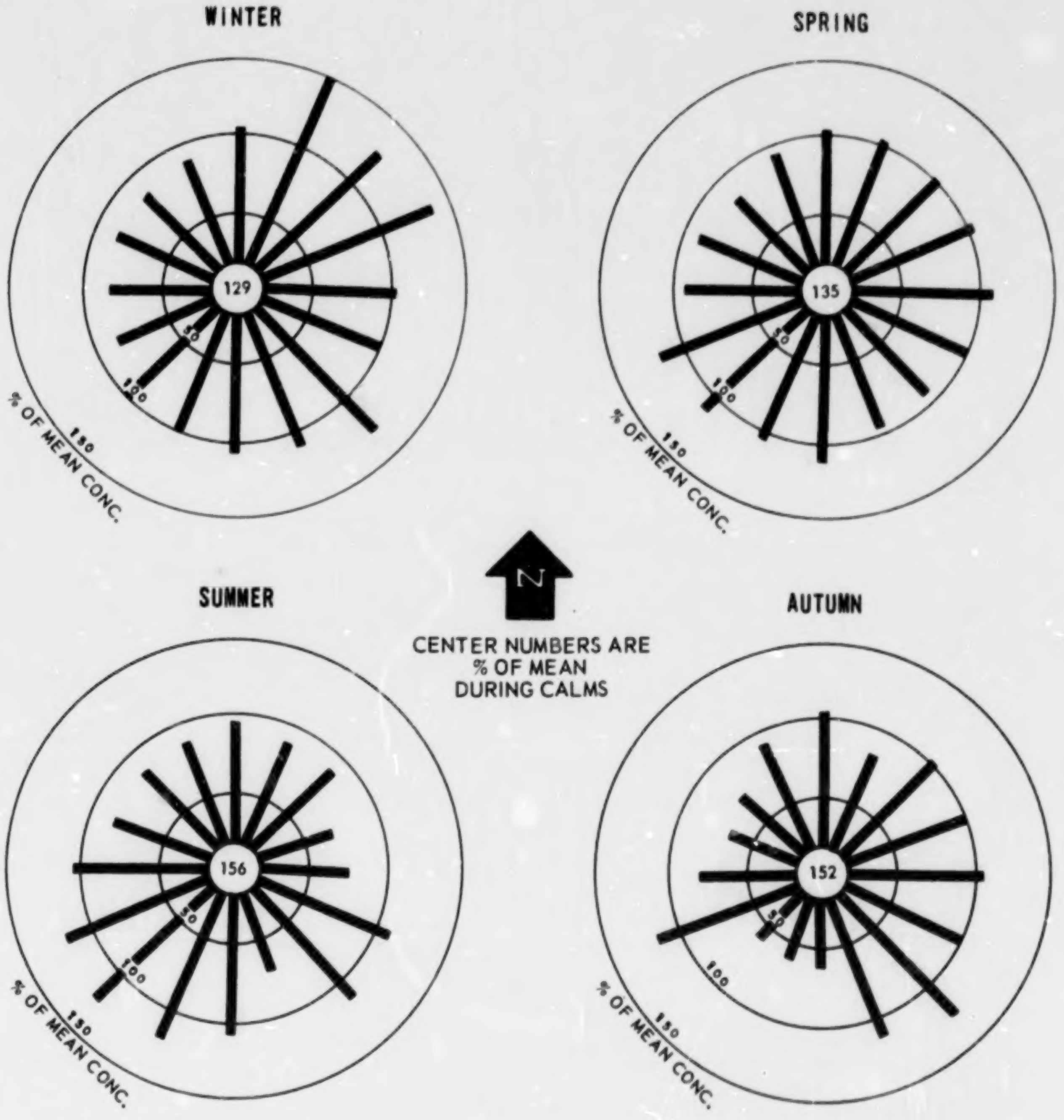
In additon to changes in atmospheric dilution and source strength, ambient levels of the oxides of nitrogen also depend upon a chemical equilibrium in the atmosphere, which involves a complex series of chemical reactions between the oxides of nitrogen and hydrocarbons photolyzed by solar radiation. The effect of these photochemical reactions is a net conversion of NO into NO_2 and the formation of reaction products such as ozone and oxygenated organics, which typify "photochemical smog." This role of the oxides of nitrogen is of particular interest.

Were it not for this photochemical conversion of NO into NO_2, levels of each of the oxides would be expected to show a pattern of seasonal variation similar to that of total nitrogen oxides in Figure 2-14. Instead, nitric oxide levels exhibited a seasonal pattern more accentuated than that of total oxides of nitrogen, with values ranging nearly an order of magnitude from summer to winter; monthly nitrogen dioxide concentrations, conversely, exhibited no consistent seasonal pattern and were much less variable than the total, ranging only about 25 percent above and below the 2-year mean (Figure 2-15). This difference



SEASON	NUMBER OF VALID HOURS REPRESENTED																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
WINTER	122	40	53	35	28	19	43	38	281	77	67	50	59	114	199	147	28
SPRING	116	59	82	72	73	47	59	76	381	128	93	51	70	156	236	118	25
SUMMER	76	69	80	30	28	35	54	66	247	121	95	83	59	83	139	89	84
AUTUMN	145	129	146	66	33	31	32	97	272	181	120	109	66	124	124	160	123
TOTAL	459	297	361	203	162	132	188	277	1181	507	375	293	254	481	698	514	260

Figure 2-12. Directional patterns of nitric oxide concentrations, 1963.



CENTER NUMBERS ARE % OF MEAN DURING CALMS

SEASON	NUMBER OF VALID HOURS REPRESENTED																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
WINTER	163	51	67	50	30	19	42	47	316	87	70	63	78	166	273	193	27
SPRING	109	63	85	72	72	43	51	77	375	126	92	48	70	162	235	108	24
SUMMER	86	64	77	32	30	35	51	96	283	143	121	111	73	97	188	110	97
AUTUMN	143	136	143	66	31	27	27	92	254	175	117	110	65	138	136	153	113
TOTAL	501	314	372	220	163	124	171	312	1228	531	400	332	288	563	832	564	261

Figure 2-13. Directional patterns of nitrogen dioxide concentrations, 1963.

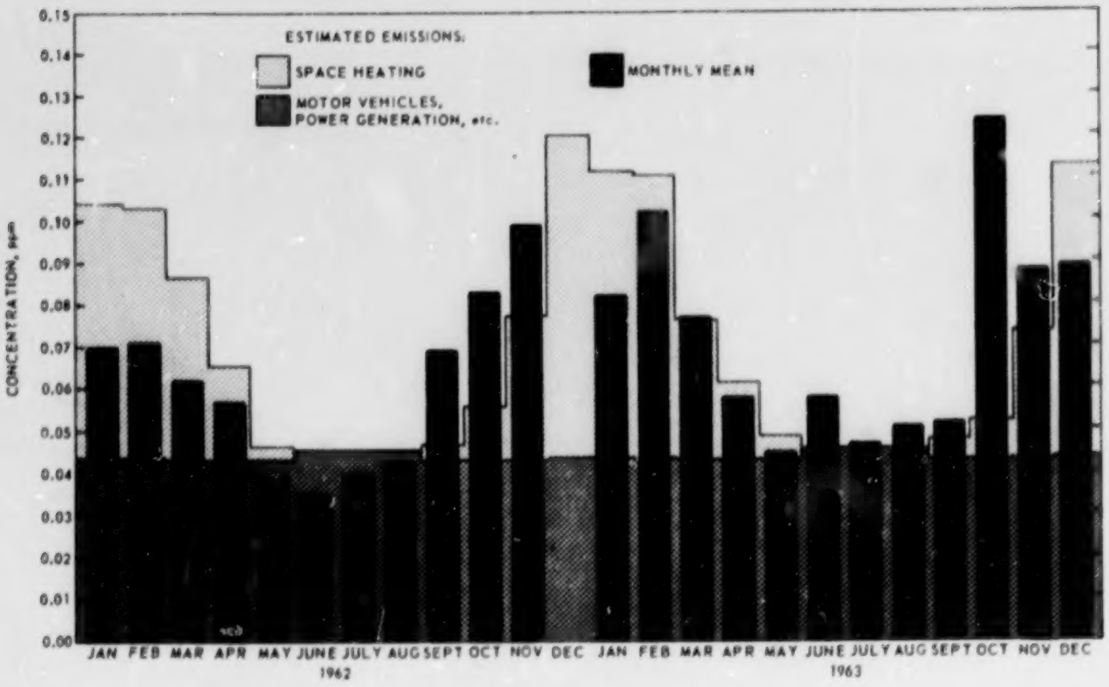


Figure 2-14. Comparison of monthly mean oxides of nitrogen concentrations with estimated emission pattern.

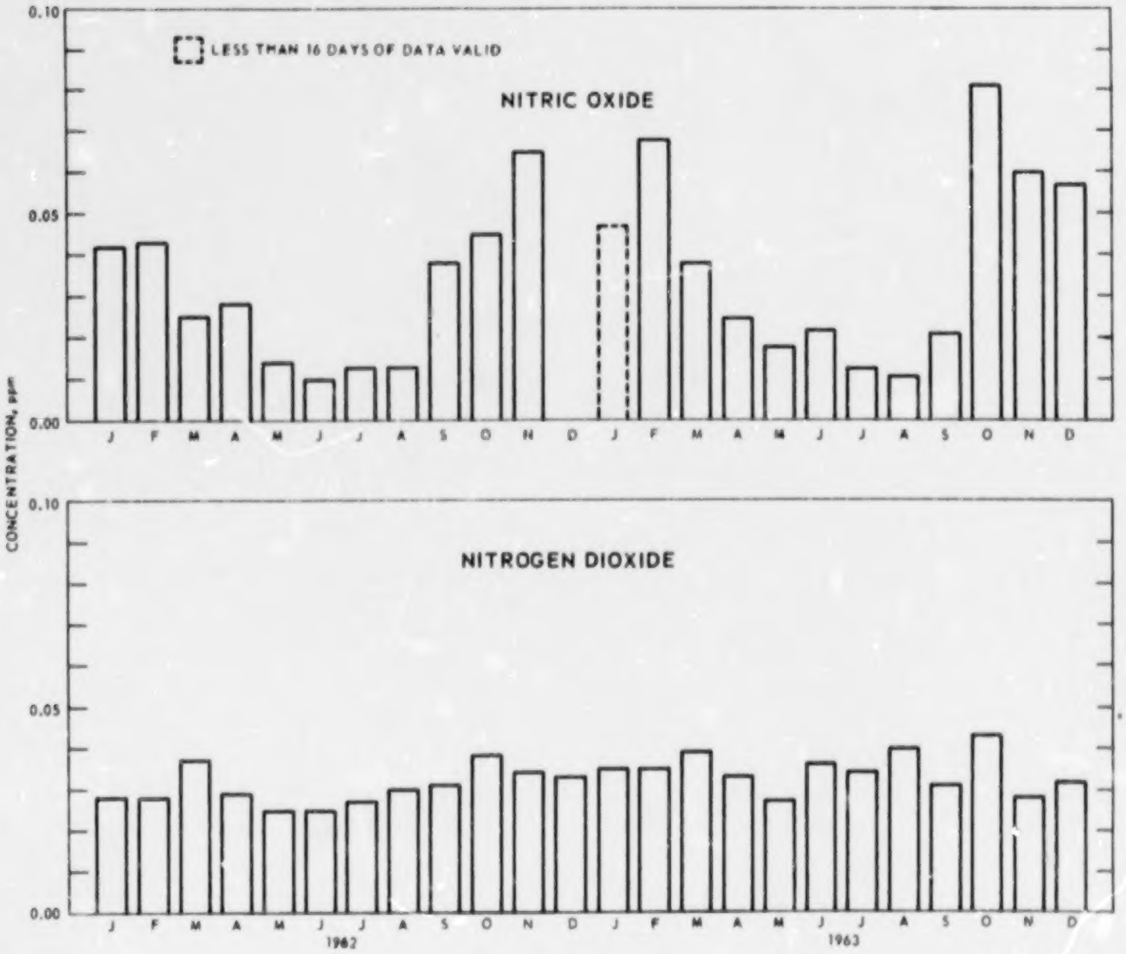


Figure 2-15. Monthly mean concentrations of nitric oxide and nitrogen dioxide.

in patterns resulted from increased photochemical conversion of NO into NO_2 in the more sunny months, when emissions of both oxides were lowest; the conversion subtracted from the already low nitric oxide levels and added to the minimum nitrogen dioxide levels.

This seasonally varying difference between levels of the two oxides of nitrogen is seen also in Figure 2-16, which compares their average monthly diurnal variation patterns (values for January 1962 and January 1963 are averaged together, and so on for each monthly pattern). Most of the diurnal patterns in Figure 2-16 reflect the typical diurnal cycle of afternoon minima, higher nocturnal levels, and morning peaks. The interactions of emission rate, atmospheric dilution capacity, and NO-NO_2 conversion rate introduced seasonal modifications of these features and, in the winter nitrogen dioxide patterns, eliminated them completely.

Maximum dilution in the atmosphere and maximum photochemical conversion into nitrogen dioxide produced consistent afternoon minima in the nitric oxide curves, just as the same factors produced low summer levels in the seasonal pattern. These minima ranged from over 0.04 ppm in February to less than 0.005 ppm in the summer months, following the seasonal changes in solar radiation intensity. The afternoon nitrogen dioxide levels reflected the influence of sunlight as a balance between the formation of NO_2 from NO and the further photochemical formation of other nitrogen-containing reaction products. In winter, with minimal solar radiation and afternoon mixing, the high morning concentrations of nitric oxide were converted slowly to nitrogen dioxide, which accumulated sufficiently to produce higher levels in the afternoon than overnight. In summer, with greatly increased solar radiation, the formation of NO_2 from NO was rapid enough to produce a distinct morning peak similar to but later than the nitric oxide peak; good atmospheric dilution and further photochemical conversion then produced distinct afternoon minima in the patterns.

The evening and nocturnal portions of the diurnal patterns in Figure 2-16 exhibit the effects of evening rush-hour traffic and decreasing atmospheric dilution, with the attendant concentration of oxides of nitrogen emissions. During the winter months, nocturnal radiation inversions had frequently formed by the time of the peak evening traffic emissions, and photochemical activity had generally ceased, permitting nitric oxide to accumulate rapidly to produce distinct peaks from 5 to 7 p.m. in the winter patterns. In summer, the period of insolation was prolonged and the city changed to Daylight Saving Time, in effect shifting the evening traffic peak 1 hour earlier, so that the peak emissions occurred at a time when the photochemical conversion rate was still high. Consequently, the June, July, and August patterns exhibit peaks in the nitrogen dioxide curves at 4 to 5 p.m. (EST) and the expected nocturnal increase in nitric oxide levels does not occur until late in the evening. During autumn the increasingly early formation of poor dilution conditions favored an increase in evening levels of both of the oxides of nitrogen by inhibiting the dissipation of emissions from the evening rush-hour traffic, and the decreasing level of solar radiation caused more of the rush-hour emissions to be accumulated in the form of nitric oxide. Thus by November, the patterns indicate both oxides of nitrogen increasing at 4 to 5 p.m., but only nitric oxide being accumulated overnight.

The most distinct feature of the oxides of nitrogen patterns in Figure 2-16 is the peak levels in the morning. Because the largest portion of oxides of nitrogen emissions in Washington are from motor vehicles — a disperse, low-level type of source — very little of the morning peak levels can be attributed to fumigation effects; note the nearly complete elimination of the morning peak concentrations on Sundays and holidays in Figure 2-17. Rather, the morning oxides of nitrogen maxima are the direct result of the emissions from morning rush-hour traffic, although the magnitude of the peaks and the time of their occurrence are also affected by the rate of dispersion of the vehicular emissions in the atmosphere and by the rate of photochemical activity. The patterns in Figure 2-16 for the winter months exhibit high, broad nitric oxide peaks, since both the rate of atmospheric dilution and the rate of photochemical conversion to nitrogen dioxide are relatively low in the morning. During the summer the dilution capacity of the atmosphere and the rate of photochemical activity are much greater, and both of these factors are active in reducing the atmospheric nitric oxide levels during the time when the rate of emissions from vehicular traffic is increasing rapidly. As a result the nitric oxide patterns for the summer months in Figure 2-16 exhibit much lower and more sharply defined morning peaks than are seen in the winter patterns. Note also the earlier occurrence of the peaks in the warmer months. This is partially due to the increasingly early ventilation and photochemical activity, but also reflects the shift of human activity in the city to Daylight Saving Time in the summer. The change in local time has the effect

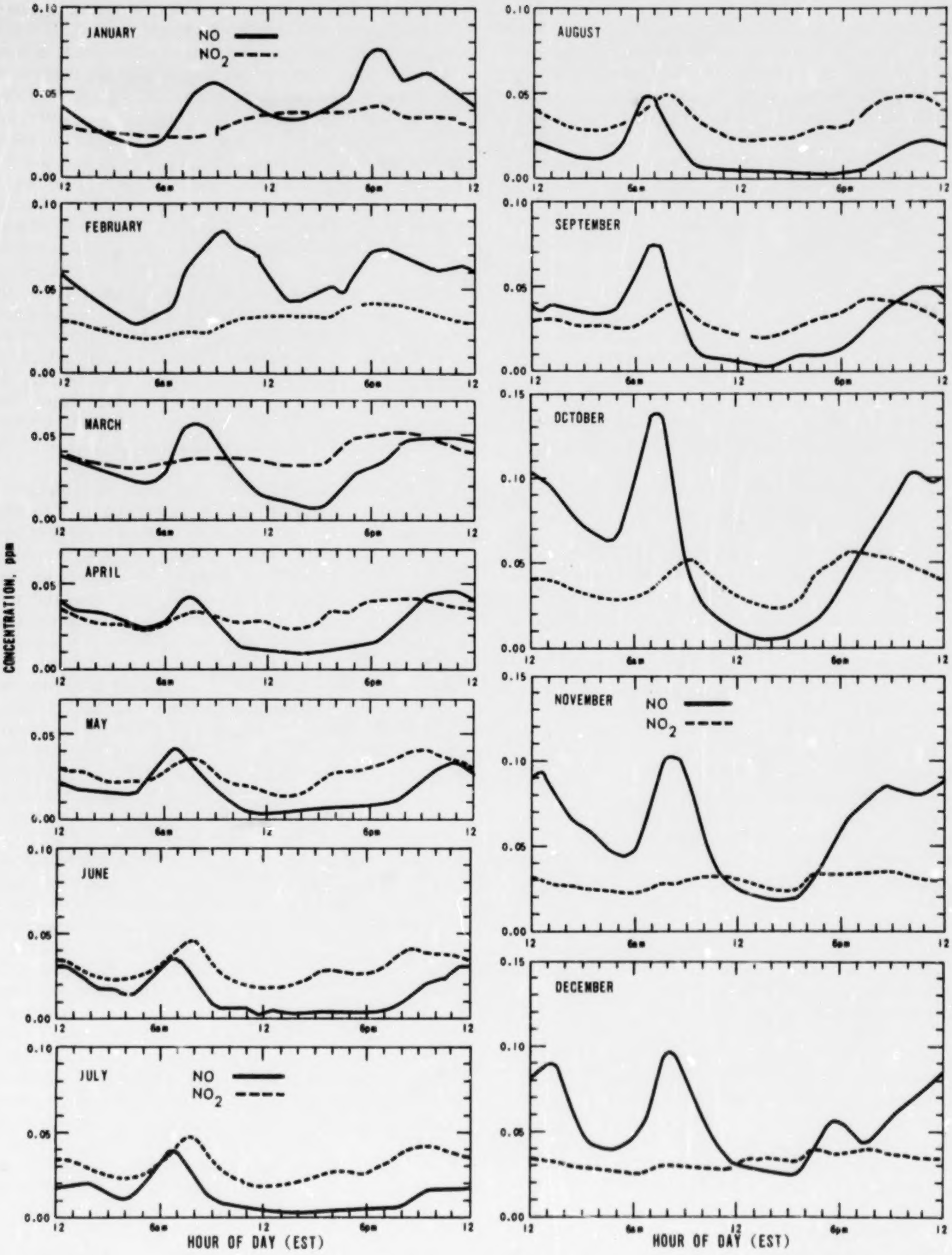


Figure 2-16. Diurnal variation of oxides of nitrogen levels by month.

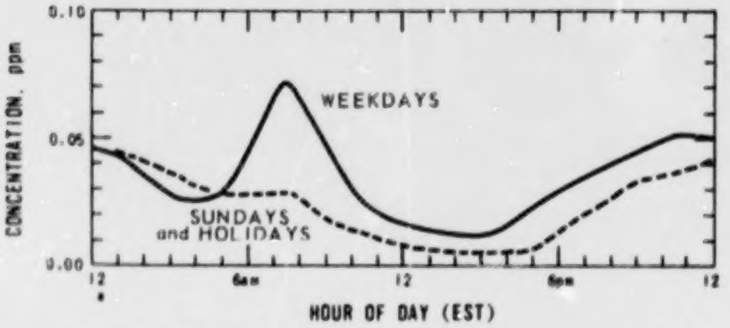


Figure 2-17. **Diurnal variation of nitric oxide levels on weekdays and Sundays.**

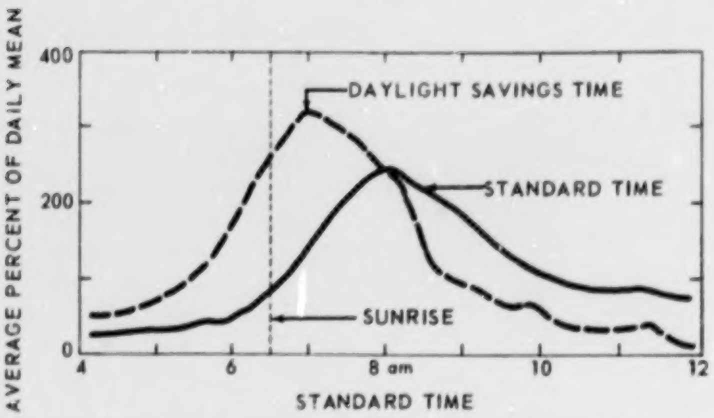


Figure 2-18. **Portions of diurnal variation patterns of nitric oxide level during change from daylight saving to standard time, autumn.**

of shifting the rush-hour traffic peak 1 hour earlier with respect to the time scale in Figure 2-16, since the CAMP station continues reporting data on Eastern Standard Time. The effect is seen clearly in a comparison of the April and May patterns and of the October and November patterns of Figure 2-16. In both cases the morning nitric oxide peaks exhibit a distinct 1-hour shift, not only in the time of the peak concentrations, but also in the time of the initial upward inflection at the beginning of the peak.

The shape of the morning peaks in the nitrogen dioxide patterns in Figure 2-16 also changes considerably from month to month. In the winter months, when the level of solar radiation is low, the photochemical conversion of NO into NO_2 is quite slow; hence the nitrogen dioxide patterns exhibit a slow rise through the morning to maxima in the afternoon. In the summer, when conversion is much more rapid, the nitrogen dioxide levels rise quite rapidly following the nitric oxide peak, and then decrease as ventilation increases and as further photochemical reactions consume nitrogen dioxide in the formation of oxidants. Thus the patterns for the warmer months exhibit a distinct morning peak in nitrogen dioxide concentrations, lagging about an hour after the nitric oxide peak and exceeding it in magnitude during the sunniest months.

Since the diurnal variation patterns in Figure 2-16, as well as others in this volume, are compiled from average hourly pollutant concentrations, definition of the time of occurrence of the peaks is not precise. Figure 2-18 illustrates the morning-peak portions of diurnal variation patterns compiled from 15-minute average nitric oxide concentrations; the patterns are for the 5 weekdays immediately before and after the change from Daylight Saving to Standard Time in October (1962 and 1963 are averaged together). The times of the peaks are more precisely defined in this manner, and the 1-hour shift in human activity with respect to Standard Time results in a distinct 1-hour shift in the time of the peak concentrations. Figure 2-18 is taken from a more thorough discussion of morning peak concentrations, their time of occurrence, and their relation to meteorology and emissions.[14]

Frequency distributions of oxides of nitrogen concentrations are compiled in Tables 2-7 and 2-8 and are presented graphically in Figure 2-19. The distributions for averaging times longer than 5 minutes show little difference except for the several maxima; even the maxima changed significantly only for averaging times exceeding 1 hour. This similarity may be due in part to sample averaging in the instrumentation systems (See Appendix A), but also reflects the fact that concentrations of the oxides of nitrogen generally do not vary rapidly.

The differences between the two families of curves in Figure 2-19 illustrate the difference in overall variability between the two oxides of nitrogen. Nitrogen dioxide varied less, both seasonally and diurnally. The curves are more closely spaced and have a much lower slope. The inflections at the upper ends of the curves for October 1963 result from a lengthy atmospheric stagnation during that month; the stagnation was also responsible for the exaggerated diurnal variability in the October curve of Figure 2-16.

The highest daily average concentration of nitric oxide also occurred in October 1963 (0.26 ppm on the 18th) during the period of atmospheric stagnation. The shorter-term maxima, however, occurred on December 26-27, 1963, during an overnight radiation inversion (see Table 3-49).

TABLE 2-7
FREQUENCY DISTRIBUTIONS OF NITRIC OXIDE DATA

	Avg'g time	Percent of data valid	Concentration, ppm											
			Min	Frequency distribution, %									Max	Mean
				10	30	50	70	90	92	94	96	98		
Jan 1962	5 min	74.8	0.00	0.00	0.02	0.03	0.04	0.08	0.09	0.11	0.15	0.20	0.44	0.042
Feb 1962		52.9	0.00	0.00	0.02	0.03	0.05	0.09	0.11	0.12	0.14	0.17	0.26	[a]
Mar 1962		77.5	0.00	0.00	0.01	0.02	0.03	0.06	0.07	0.08	0.09	0.11	0.19	0.025
Apr 1962		90.6	0.00	0.00	0.01	0.01	0.02	0.07	0.09	0.10	0.12	0.17	0.40	0.028
May 1962		87.2	0.00	0.00	0.00	0.01	0.02	0.04	0.04	0.05	0.06	0.08	0.26	0.014
Jun 1962		86.5	0.00	0.00	0.00	0.01	0.01	0.03	0.03	0.04	0.05	0.06	0.15	0.010
Jul 1962		91.8	0.00	0.00	0.00	0.01	0.01	0.03	0.04	0.04	0.05	0.07	0.21	0.013
Aug 1962		74.3	0.00	0.00	0.00	0.01	0.01	0.03	0.04	0.04	0.05	0.11	0.31	0.013
Sep 1962		92.8	0.00	0.00	0.01	0.01	0.03	0.10	0.12	0.16	0.23	0.32	0.51	0.038
Oct 1962		90.9	0.00	0.00	0.01	0.02	0.05	0.12	0.14	0.15	0.19	0.27	0.44	0.045
Nov 1962		78.8	0.00	0.01	0.03	0.04	0.07	0.13	0.15	0.18	[illegible]	0.33	0.68	0.065
Dec 1962		0.0						no valid data						
Year 1962	5 min	74.8	0.00	0.00	0.01	0.01	0.03	0.07	0.08	0.10	0.13	0.19	0.68	0.029
Jan 1963	5 min	50.0	0.00	0.01	0.02	0.04	0.06	0.10	0.11	0.12	0.13	0.16	0.38	[a]
Feb 1963		72.9	0.00	0.01	0.02	0.04	0.08	0.16	0.18	0.20	0.24	0.28	0.67	0.068
Mar 1963		80.7	0.00	0.00	0.01	0.02	0.04	0.09	0.11	0.14	0.17	0.22	0.52	0.038
Apr 1963		86.2	0.00	0.00	0.00	0.01	0.02	0.05	0.06	0.08	0.11	0.20	0.58	0.025
May 1963		80.7	0.00	0.00	0.00	0.01	0.02	0.05	0.06	0.07	0.09	0.12	0.29	0.018
Jun 1963		72.3	0.00	0.00	0.00	0.01	0.02	0.06	0.07	0.08	0.09	0.11	0.33	0.022
Jul 1963		54.7	0.00	0.00	0.00	0.01	0.01	0.04	0.04	0.05	0.07	0.09	0.19	0.013
Aug 1963		67.7	0.00	0.00	0.00	0.01	0.01	0.03	0.04	0.06	0.07	0.09	0.24	0.011
Sep 1963		93.9	0.00	0.00	0.00	0.01	0.02	0.06	0.07	0.10	0.13	0.16	0.37	0.021
Oct 1963		91.2	0.00	0.00	0.01	0.03	0.07	0.27	0.31	0.35	0.41	0.48	0.73	0.081
Nov 1963		82.9	0.00	0.00	0.01	0.03	0.06	0.16	0.19	0.23	0.28	0.37	0.72	0.060
Dec 1963		72.0	0.00	0.00	0.02	0.04	0.06	0.12	0.13	0.15	0.18	0.24	1.03	0.056
Year 1963	5 min	75.4	0.00	0.00	0.01	0.02	0.03	0.10	0.12	0.14	0.18	0.27	1.03	0.038
Two years 1962-1963	5 min	75.0	0.00	0.00	0.01	0.01	0.03	0.08	0.10	0.12	0.16	0.23	1.03	0.034
	10 min		0.00	0.00	0.01	0.02	0.03	0.09	0.10	0.12	0.16	0.24	1.03	
	30 min		0.00	0.00	0.01	0.01	0.03	0.08	0.10	0.12	0.16	0.24	0.94	
	1 hr		0.00	0.00	0.01	0.01	0.03	0.08	0.10	0.12	0.15	0.23	0.87	
	4 hr		0.00	0.00	0.01	0.02	0.03	0.08	0.09	0.11	0.15	0.21	0.54	
	12 hr		0.00	0.00	0.01	0.02	0.04	0.08	0.09	0.11	0.14	0.19	0.38	
	24 hr		0.00	0.00	0.01	0.02	0.04	0.08	0.09	0.10	0.14	0.17	0.26	
Spring 1962	5 min	85.0	0.00	0.00	0.01	0.01	0.02	0.06	0.06	0.08	0.09	0.12	0.40	0.022
Summer 1962		84.2	0.00	0.00	0.00	0.01	0.01	0.03	0.04	0.04	0.05	0.07	0.31	0.012
Autumn 1962		87.5	0.00	0.00	0.01	0.02	0.05	0.12	0.14	0.16	0.22	0.30	0.68	0.048
Winter 1962 1963		39.9	0.00	0.01	0.02	0.04	0.07	0.13	0.14	0.16	0.20	0.26	0.67	[a]
Spring 1963		82.5	0.00	0.00	0.01	0.01	0.02	0.06	0.08	0.10	0.13	0.19	0.58	0.027
Summer 1963		64.8	0.00	0.00	0.00	0.01	0.01	0.05	0.05	0.07	0.08	0.10	0.33	0.016
Autumn 1963		89.4	0.00	0.00	0.01	0.02	0.04	0.15	0.19	0.24	0.30	0.40	0.73	0.054

[a] Mean not computed because of insufficient valid data.

TABLE 2-8
FREQUENCY DISTRIBUTIONS OF NITROGEN DIOXIDE DATA

	Avg'g time	Percent of data valid	Concentration, ppm											
			Min	Frequency distribution, %									Max	Arith mean
				10	30	50	70	90	92	94	96	98		
Jan 1962	5 min	79.8	0.00	0.01	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.20	0.028
Feb 1962		86.2	0.00	0.01	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.08	0.028
Mar 1962		81.8	0.00	0.02	0.03	0.04	0.04	0.06	0.06	0.06	0.07	0.07	0.10	0.037
Apr 1962		89.8	0.00	0.00	0.02	0.03	0.04	0.05	0.05	0.06	0.06	0.07	0.09	0.029
May 1962		83.5	0.00	0.00	0.02	0.02	0.03	0.04	0.05	0.05	0.05	0.06	0.09	0.025
Jun 1962		89.3	0.00	0.00	0.02	0.02	0.03	0.04	0.05	0.05	0.05	0.06	0.17	0.025
Jul 1962		85.8	0.00	0.00	0.02	0.03	0.03	0.05	0.05	0.06	0.07	0.08	0.16	0.027
Aug 1962		76.9	0.00	0.01	0.02	0.03	0.04	0.05	0.05	0.06	0.06	0.08	0.17	0.030
Sep 1962		91.6	0.00	0.01	0.02	0.03	0.04	0.06	0.06	0.06	0.07	0.08	0.37	0.031
Oct 1962		89.9	0.00	0.02	0.03	0.04	0.05	0.06	0.07	0.07	0.07	0.08	0.19	0.038
Nov 1962		71.6	0.00	0.01	0.02	0.03	0.04	0.06	0.06	0.07	0.07	0.08	0.14	0.034
Dec 1962		50.7	0.00	0.02	0.03	0.03	0.04	0.05	0.05	0.05	0.06	0.06	0.12	0.033
Year 1962	5 min	81.3	0.00	0.01	0.02	0.03	0.04	0.05	0.05	0.06	0.06	0.07	0.37	0.030
Jan 1962	5 min	79.3	0.00	0.01	0.02	0.03	0.04	0.06	0.06	0.07	0.08	0.10	0.19	0.035
Feb 1962		84.5	0.00	0.02	0.03	0.03	0.04	0.05	0.06	0.06	0.07	0.09	0.13	0.035
Mar 1962		86.0	0.00	0.02	0.03	0.04	0.05	0.06	0.06	0.07	0.08	0.09	0.15	0.039
Apr 1962		84.7	0.00	0.02	0.02	0.03	0.04	0.06	0.06	0.06	0.07	0.08	0.12	0.033
May 1962		73.2	0.00	0.00	0.02	0.02	0.03	0.05	0.05	0.06	0.06	0.07	0.12	0.027
Jun 1962		83.7	0.00	0.01	0.02	0.03	0.04	0.06	0.07	0.07	0.08	0.10	0.24	0.036
Jul 1962		84.8	0.00	0.01	0.02	0.03	0.04	0.06	0.06	0.05	0.07	0.08	0.23	0.034
Aug 1962		60.9	0.00	0.02	0.03	0.04	0.05	0.07	0.07	0.08	0.08	0.09	0.22	0.040
Sep 1962		81.5	0.00	0.01	0.02	0.03	0.04	0.06	0.06	0.07	0.07	0.08	0.17	0.031
Oct 1962		92.7	0.00	0.01	0.02	0.04	0.05	0.09	0.09	0.10	0.11	0.12	0.24	0.043
Nov 1962		89.2	0.00	0.01	0.02	0.03	0.03	0.04	0.05	0.05	0.05	0.06	0.12	0.028
Dec 1962		76.8	0.00	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.05	0.06	0.13	0.032
Year 1963	5 min	81.4	0.00	0.01	0.02	0.03	0.04	0.06	0.06	0.07	0.08	0.09	0.24	0.034
Two years 1962-1963	5 min	81.4	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.06	0.07	0.08	0.37	0.032
	10 min		0.00	0.01	0.02	0.03	0.04	0.06	0.06	0.06	0.07	0.08	0.37	
	30 min		0.00	0.01	0.02	0.03	0.04	0.06	0.06	0.06	0.07	0.08	0.34	
	1 hr		0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.06	0.07	0.08	0.30	
	4 hr		0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.06	0.07	0.08	0.14	
	12 hr		0.00	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.06	0.07	0.10	
	24 hr		0.00	0.02	0.03	0.03	0.04	0.05	0.05	0.05	0.06	0.07	0.09	
Spring 1962	5 min	85.0	0.00	0.01	0.02	0.03	0.04	0.05	0.05	0.06	0.06	0.07	0.10	0.030
Summer 1962		83.9	0.00	0.00	0.02	0.02	0.03	0.05	0.05	0.05	0.06	0.07	0.17	0.027
Autumn 1962		84.5	0.00	0.01	0.02	0.03	0.04	0.06	0.06	0.07	0.07	0.08	0.37	0.034
Winter 1962 1963		71.1	0.00	0.02	0.02	0.03	0.04	0.06	0.06	0.06	0.07	0.09	0.19	0.034
Spring 1963		81.3	0.00	0.01	0.02	0.03	0.04	0.06	0.06	0.06	0.07	0.08	0.15	0.033
Summer 1963		76.4	0.00	0.01	0.02	0.03	0.04	0.06	0.07	0.07	0.08	0.09	0.24	0.036
Autumn 1963		87.9	0.00	0.01	0.02	0.03	0.04	0.06	0.07	0.08	0.09	0.10	0.24	0.034

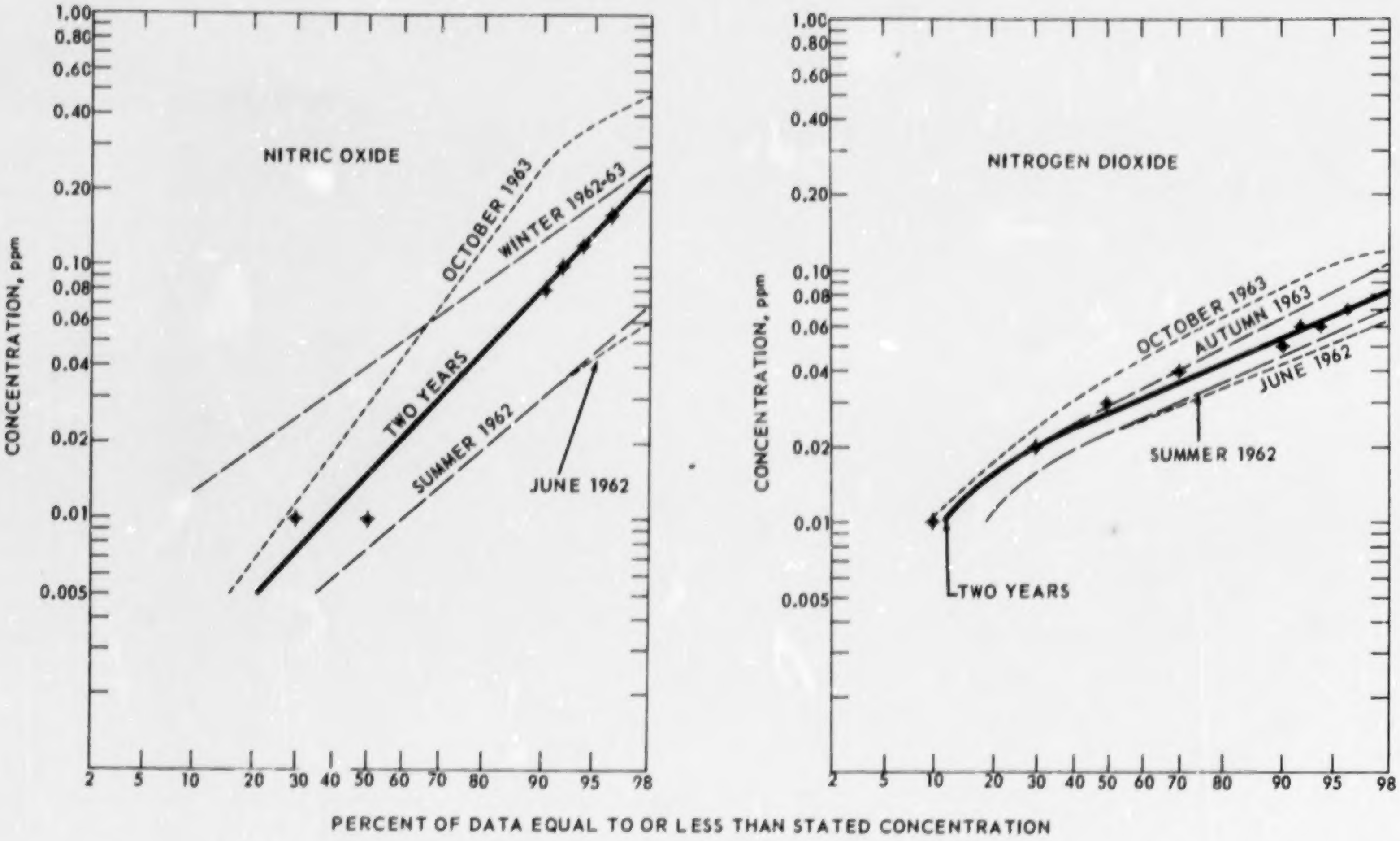


Figure 2-19. Frequency distributions of 5-minute oxides of nitrogen data.

Total Oxidant

As generally used, the term total oxidant includes all constituents of the atmosphere that are capable of exerting an oxidizing effect. Oxidizing substances are rarely emitted as such from pollution sources, but are generally formed in the atmosphere by photochemical reactions. Some of the total oxidant found in the lower atmosphere consists of ozone formed from oxygen at high altitudes by high-energy solar radiation and brought to lower levels by air currents. The remainder of the total oxidant consists of ozone and a wide variety of other oxidants formed in the lower atmosphere by reactions of man-injected pollutants, primarily oxides of nitrogen and hydrocarbons.

The substances produced in the lower atmosphere are the oxidants of primary interest in air pollution; they have been implicated as the cause of the adverse effects associated with photochemical smog, and are, at any rate, a measure of the smog-producing reactions. Thus the oxidant levels of significance are those of the daylight hours, and the use of averaged values dilutes the value of total oxidant as a smog indicator by including data for the nocturnal hours. That is, an average of the oxidant data recorded between 6 a.m. and 6 p.m. (0.019 ppm) would be a better comparative indicator of photochemical smog than the mean of all available data (0.012 ppm) presented in Table 2-1. For this reason, the seasonal variation pattern of total oxidant in Figure 2-20 is presented in terms of both nocturnal and daytime means for each month.

The daytime means in Figure 2-20 are generally higher than the nocturnal averages, as expected, but the most striking feature is the seasonal pattern of the daytime means. Average daytime concentrations of total oxidant ranged from essentially zero during several winter months to about 0.040 ppm during the summers, while the nocturnal means ranged from near-zero only as high as 0.015 ppm.

Although oxidant levels would be expected to be lower during the less sunny months (because of reduced photochemical activity), the near-zero winter levels recorded also include a negative interference effect from the high winter concentrations of sulfur dioxide.* During January 1962, when sulfur dioxide levels averaged

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*Sulfur dioxide acts as a reducing agent to reverse the chemical reaction used as the sensing mechanism for total oxidants (see Appendix A).

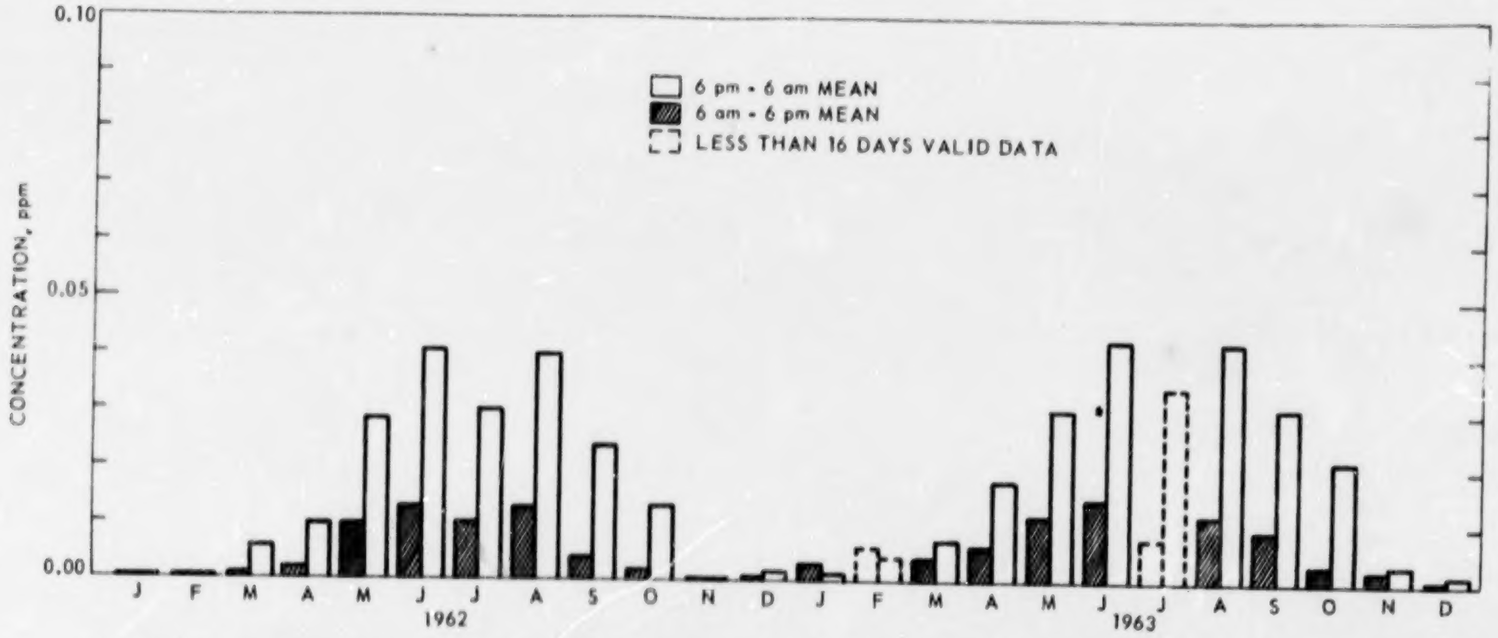

Figure 2-20. Monthly mean total oxidant levels during daytime and nighttime hours (not corrected for SO_2 interference).

0.09 ppm, the recorded total oxidant concentration averaged 0.01 ppm (the minimum nonzero level recorded) for only 11 hours during the month, and reached a 5-minute maximum value of only 0.03 ppm. During January 1964, with an equal amount of sulfur dioxide eliminated by an absorber device, the recorded oxidant concentration averaged 0.01 ppm for the entire month and reached a 5-minute maximum of 0.08 ppm.

Because the occurrence of measurable oxidant levels, even if not always quantitative, carries a certain measure of information, the oxidant data have been included in Part 3 of this report; because of the interference, however, the data and analyses must be interpreted with care.

Figure 2-21 presents the seasonal patterns of diurnal variation in the recorded total oxidant levels. Although the seasonal differences in magnitude of the oxidant concentrations are obvious, the shapes of the patterns are essentially the same. The patterns indicate the predominant effect of solar radiation intensity, with increased levels during the daylight hours despite optimum dilution conditions, and very low levels overnight.

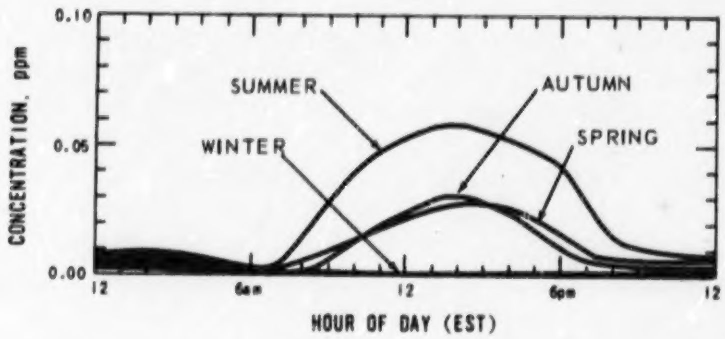

Figure 2-21. Diurnal variation of total oxidant levels by season (not corrected for SO_2 interference).

Because the portion of atmospheric oxidant resulting from photochemical reactions in the lower atmosphere is the primary indicator of the extent of the photochemical smog problem, it is worthwhile to attempt to quantitate this component by determining the background level of oxidant. The average total oxidant concentration was obtained for those hours between 10 p.m. and 4 a.m. in the summers when the interfering sulfur dioxide averaged less than 0.005 ppm (i.e., a zero hourly mean was reported). The calculated value was about 0.01 ppm of oxidant, presumed to be ozone brought down from high altitudes or nitrogen dioxide, which can exert some oxidizing effect.

An attempt to relate summer oxidant levels to measurements of total solar radiation taken in Sterling, Virginia, indicated no simple relationship for short-term measurements, presumably because other factors also exert an influence. On a more gross basis, however, the effect of solar radiation is easily demonstrated. Figure 2-22 presents average diurnal patterns for summer days classified into two groups according to solar radiation measurements, and indicates higher oxidant levels with higher solar radiation.

Assessing the seriousness of the photochemical smog problem from measurements of total oxidant levels requires estimates both of the effects produced by various levels of reaction products and of the frequency of occurrence of

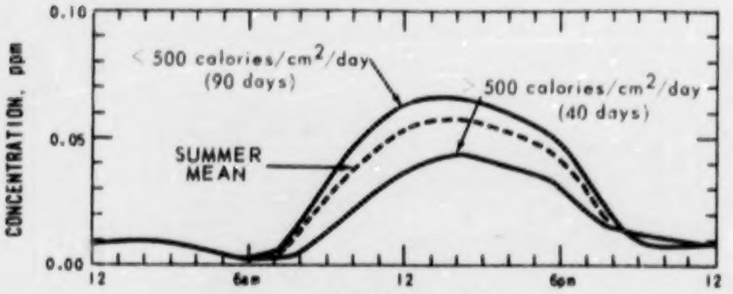

Figure 2-22. Effect of solar radiation on summer total oxidant levels (not corrected for SO_2 interference).

those levels. The Regional Air Pollution Advisory Board[11] for metropolitan Washington accepts 0.25 ppm of oxidant (phenolphthalein method) as the level at which eye irritation and vegetation damage may become problems and 0.15 ppm (phenolphthalein) as the level at which smog odor may first become evident.* The frequency with which these levels are exceeded can be determined by examining frequency distributions of the data.

Frequency distributions of 5-minute total oxidant data from the Washington CAMP station are presented graphically in Figure 2-23. It is again apparent that the group of data included in the analysis makes a great deal of difference in the distribution. The curve of all the data is well below the distribution of summer daylight data because of the large portion of nocturnal data and the heavy sulfur dioxide interference during much of the year. Thus, although only about 2 percent of all the Washington oxidant data reached or exceeded 0.08 ppm, 11 percent of the daytime (7 a.m.-8 p.m.) data that were largely unaffected by sulfur dioxide reached this level, and nearly 2 percent of such data exceeded 0.13 ppm. These levels occurred on 78 days during the year when oxidant levels averaged 0.08 ppm or more for an hour or longer, including 9 days when oxidant concentrations reached 0.13 ppm or greater for an hour or longer.

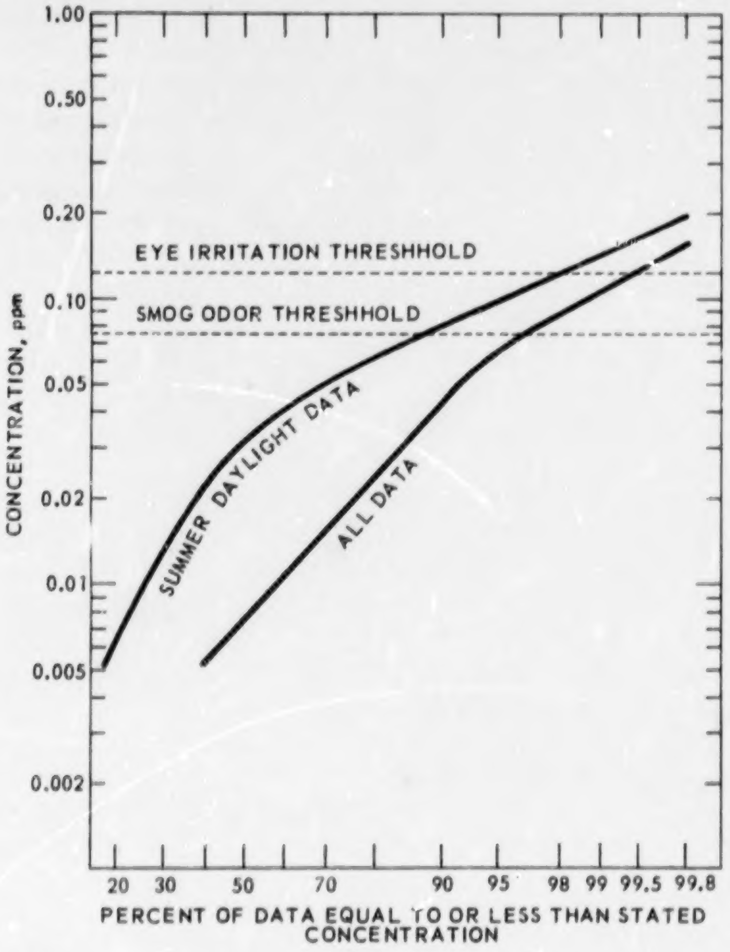

Figure 2-23. Frequency distributions of 5-minute total oxidant data (not corrected for SO_2 interference).

Total oxidant concentrations during 1963 exhibited a directional effect, highest with winds from the southeast quadrant, as indicated in Figure 2-24; since oxidants are not directly emitted from sources, such a directional effect was unexpected. The effect may be attributable to more favorable conditions for photochemical oxidation with southeasterly winds, since nitrogen dioxide levels showed a similar tendency, or it may be merely the result of the coincidence of southeasterly winds with high oxidant levels caused by other factors. No obvious explanation is available. Note also that the total oxidant concentrations associated with calm winds were lower than average, especially in the winter and summer, presumably because periods of calm winds occur most frequently at night, when oxidant levels are routinely low.

Total Hydrocarbon

Gaseous hydrocarbon compounds in the atmosphere consist of stable hydrocarbons, such as methane, which do not participate in atmospheric photochemical reactions, and other "reactive" compounds, such as olefins and aldehydes, which are in effect raw material for such smog-producing reactions. The non-reactive portion consists of a constant geophysical level of methane of about 1 ppm[15] plus variable contributions of methane and other stable hydrocarbons from gas main leaks, natural decay processes, sewage treatment, motor vehicle exhaust, and similar sources. The reactive hydrocarbons in the atmosphere result essentially from the combustion or evaporation of organic compounds, primarily gasoline. In the Washington SMSA about 80 percent of an estimated average hydrocarbon emission of 640 tons per day is attributable to motor vehicles. Roughly half of these vehicular emissions are reactive.

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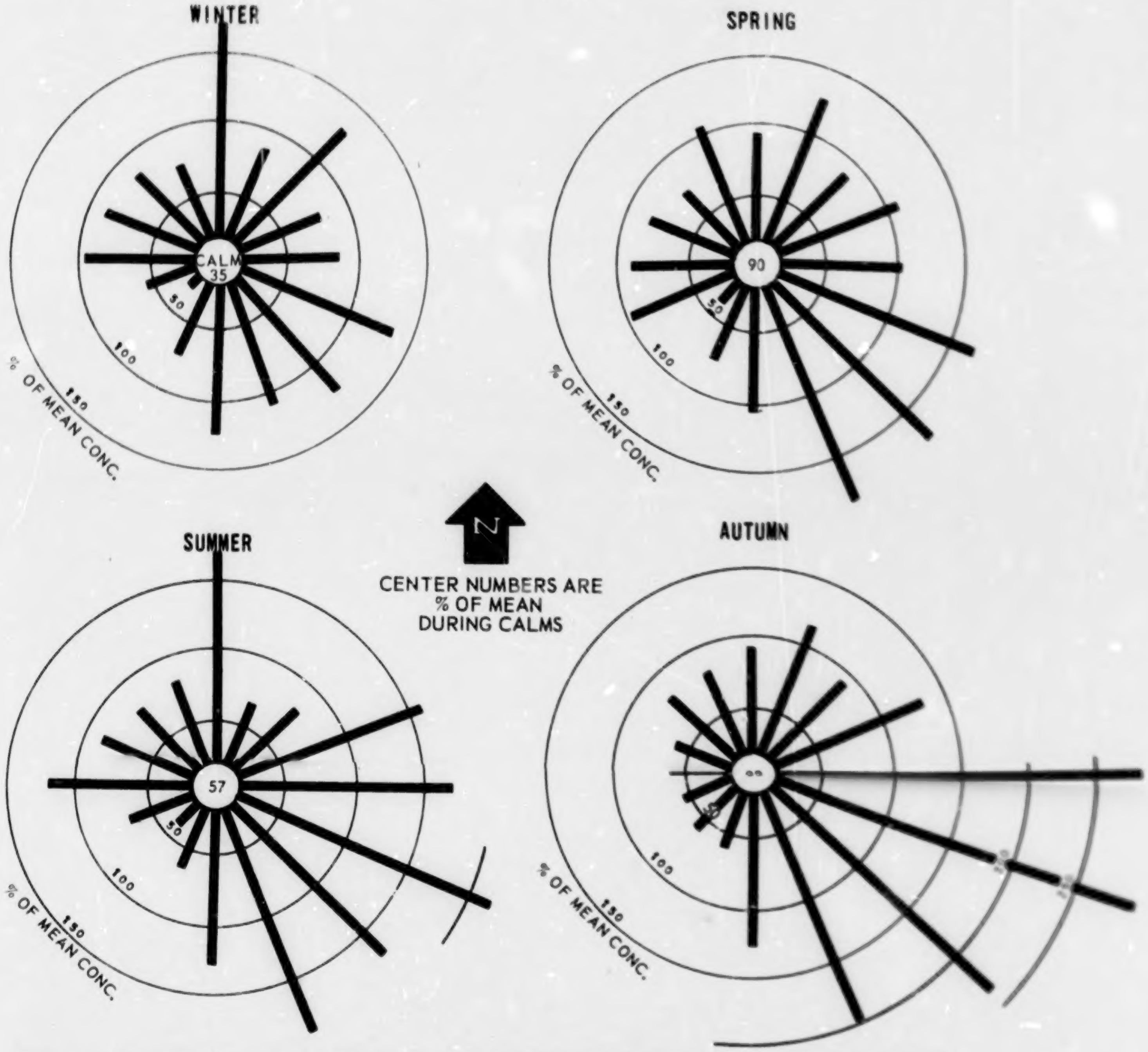
*Comparable levels in terms of the potassium iodide method used by CAMP are about 0.13 and 0.08 ppm, respectively.



SEASON	NUMBER OF VALID HOURS REPRESENTED																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
WINTER	142	34	62	46	30	17	31	41	240	76	66	57	75	144	215	164	43
SPRING	123	71	90	73	80	54	63	93	400	132	96	54	72	170	244	130	28
SUMMER	78	55	60	27	24	33	52	75	251	124	98	81	63	90	168	96	87
AUTUMN	115	128	107	57	23	25	32	104	268	153	105	98	58	132	131	142	111
TOTAL	458	288	319	203	157	129	178	313	1159	485	365	290	268	536	758	532	269

Figure 2-24. Directional patterns of total oxidant concentrations, 1963. (Not corrected for SO_2 interference)

Emissions of reactive hydrocarbons in Washington would be expected to exhibit little seasonal variation because the slight winter contribution from fuel consumption for space heating is offset by a decrease in vehicular fuels consumed. Since the methane contribution from other sources can vary greatly, however, the long-term pattern of total atmospheric hydrocarbon levels would not be expected to remain constant, nor to necessarily follow seasonal differences in atmospheric dilution capacity.

The monthly hydrocarbon concentrations did not, in fact, exhibit any definitive pattern of seasonal variation (Figure 2-2), in part because the data were quite sparse. There was, however, a distinct difference between levels during the April-August periods of the two years; levels averaged less than 1 ppm from April through August 1962 and more than 2 ppm during the similar period of 1963. This difference cannot be readily attributed to differences in meteorological factors. In fact, the data on surface wind speed and maximum mixing volume listed in Table 2-3 indicate that the opposite effect would have been expected; i.e., conditions were more favorable for pollutant dispersal during April-August 1963 than during the similar period of 1962. The lack of a similar sizeable change in levels of any other pollutant tends to confirm that gross meteorological differences offer no explanation for the difference.

The pattern of short-term variations in total hydrocarbon levels was both more distinct and more explicable. The average patterns of diurnal variation are presented by season in Figure 2-25. The patterns illustrate the difference in levels between the two summers, but their

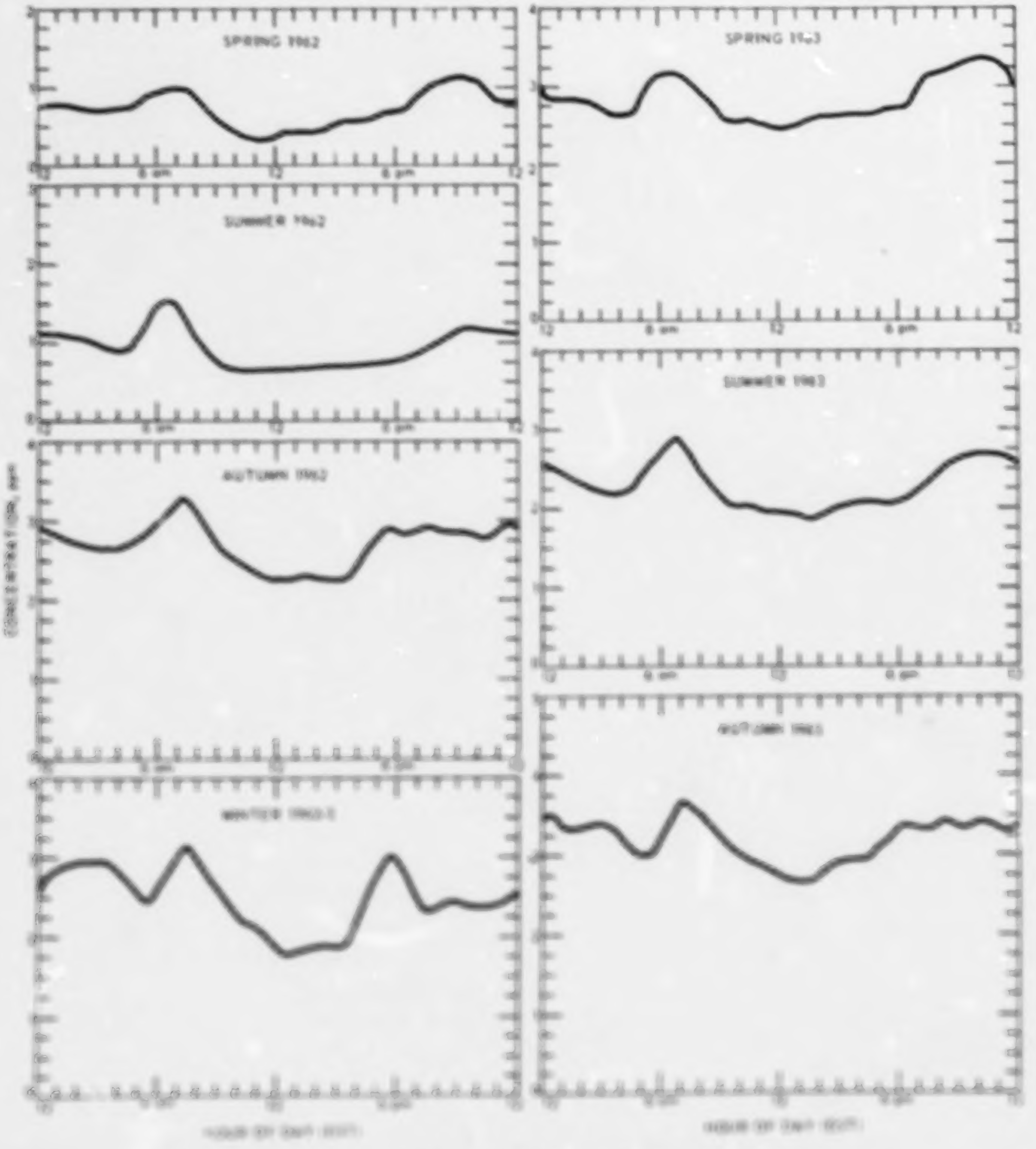


Figure 2-25. Diurnal variation of total hydrocarbon levels by season.

shapes offer no further clue to its cause. In general, the patterns exhibit the morning peaks and higher nocturnal levels previously noted as typical of most of the pollutants, although these features are somewhat erratic because of the limited number of data. The morning peaks were due primarily to morning traffic emissions, since there are essentially no major elevated sources of hydrocarbons in the Washington area.

Because of the strong influence of motor vehicle exhaust on emissions of hydrocarbons in Washington, a relationship between atmospheric levels and weekly traffic patterns would be expected. Figure 2-26 presents diurnal patterns of hydrocarbon levels averaged separately for weekdays and for Sundays and holidays. With vehicular traffic the primary variable, the patterns indicate the essential elimination of the morning peaks on Sundays, and about a 10 percent difference in mean levels. The slightly higher levels in the very early morning on Sundays may be attributable to higher evening traffic density on Saturday evenings.

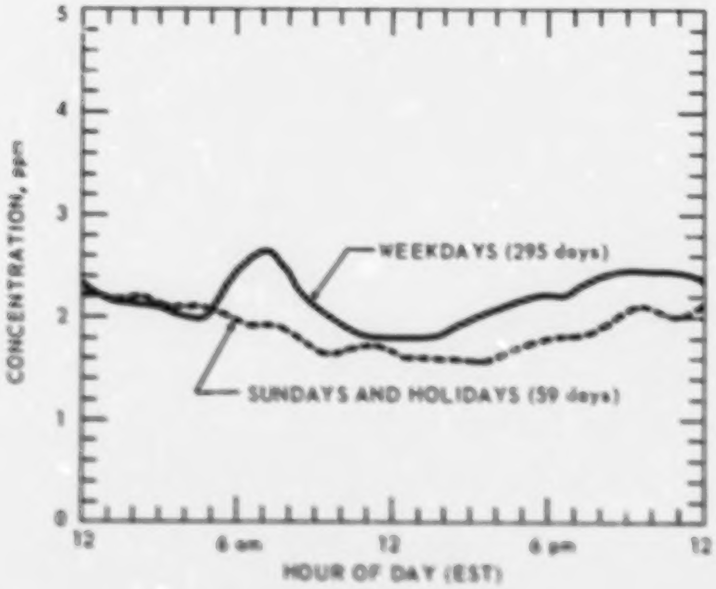


Figure 2-26. Diurnal variation of total hydrocarbon levels on weekdays and Sundays.

Another interesting facet of the morning peak concentrations is that their formation depends on relatively low wind speed. Figure 2-27 presents diurnal patterns of weekday data classified according to wind speeds from 6 to 8 a.m. The rapid dispersal of low-level traffic emissions with high wind speeds prevented the accumulation of hydrocarbon to high peak concentrations.

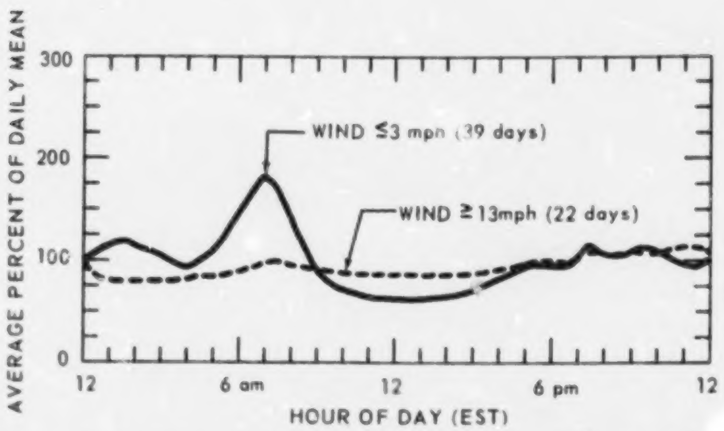


Figure 2-27. Effect of 6-8 am wind speed on diurnal variation of total hydrocarbon levels.

Frequency distributions of the 5-minute hydrocarbon values are presented in Table 2-9 and Figure 2-28. More than half the recorded hydrocarbon values were 2 ppm or lower; 4 percent were 5 ppm or higher. The curve for the season with the highest levels, Autumn 1963, exhibits an upward inflection at the high end due to a period of atmospheric stagnation during October.

Average hydrocarbon concentrations associated with winds from different directions during 1963 are presented in Figure 2-29. To reduce the diluting effect of the nondirectional background of unreactive hydrocarbons, 1 ppm was subtracted before the conversion to percentages of the seasonal mean. Although the directional effects are not striking, they are qualitatively similar to those for nitric oxide, with little pattern in winter, distinctly higher levels from the southeast during the rest of the year, and a secondary effect from the north in autumn. This similarity is as expected, since vehicular emissions contribute significantly to atmospheric levels of both nitric oxide and total hydrocarbon.

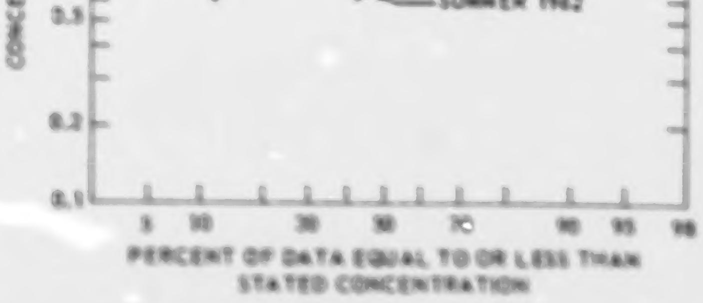
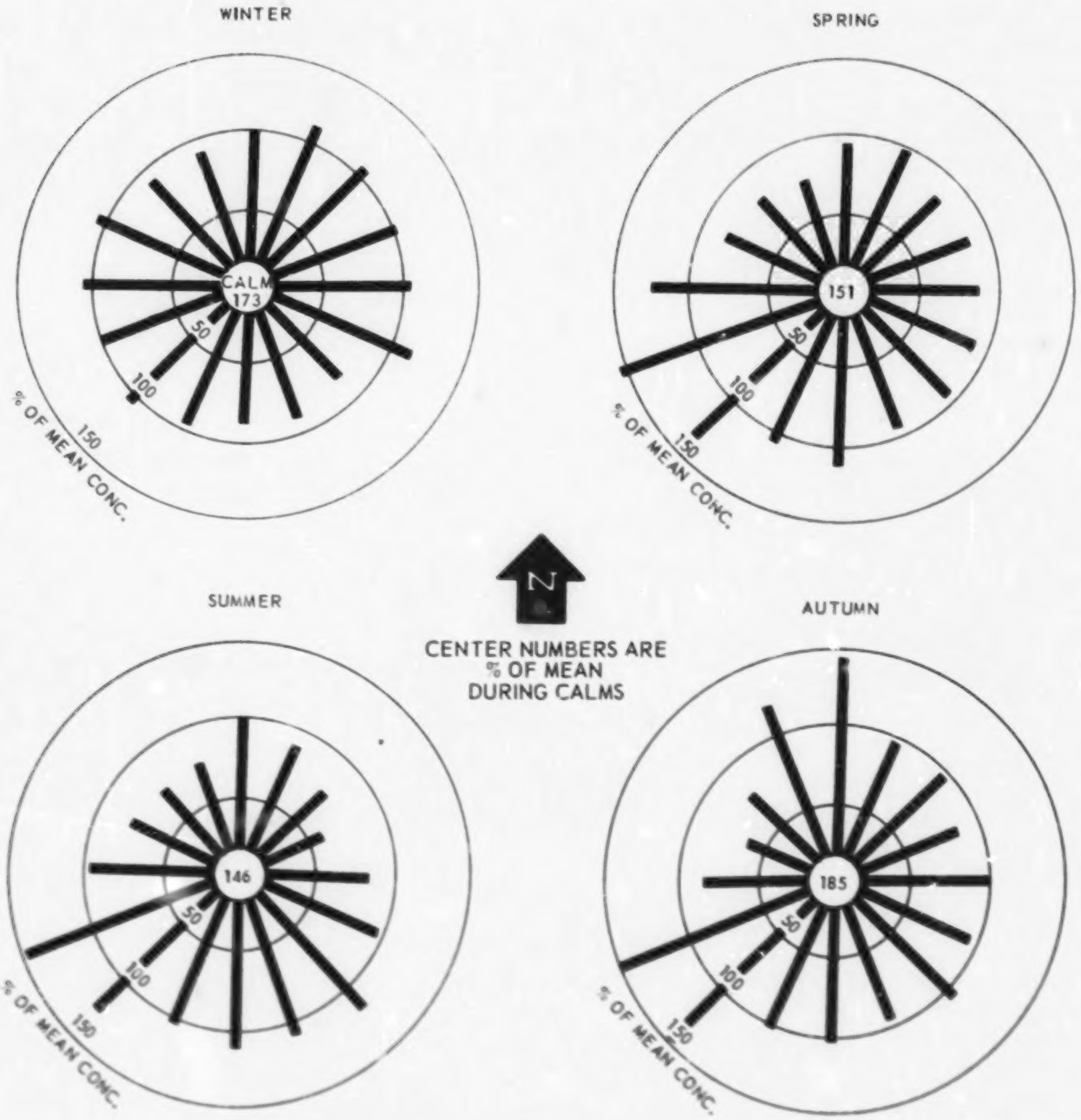


Figure 2-28. Frequency distributions of 5-minute total hydrocarbon data.

TABLE 2-9
FREQUENCY DISTRIBUTIONS OF TOTAL HYDROCARBON DATA

Period	Avg'g time	Percent of data used	Concentration, ppm as C atom											
				Frequency distribution, %										
			Min	10	30	50	70	90	92	94	96	98	Max	Ari me
Jan 1962	5 min	0.0		no valid data										
Feb 1962		0.0		no valid data										
Mar 1962		22.0	0	0	0	1	1	1	1	1	1	2	4	
Apr 1962		93.4	0	0	0	1	1	2	2	2	3	4	11	0.
May 1962		93.2	0	0	0	1	1	1	2	2	2	3	7	0.
Jun 1962		69.5	0	0	0	1	1	2	2	2	3	4	7	0.
Jul 1962		82.2	0	0	0	1	1	2	2	2	2	3	5	0.
Aug 1962		87.0	0	0	0	1	2	2	2	2	2	4	9	1.
Sep 1962		81.5	0	2	2	3	3	4	5	5	5	6	10	3.
Oct 1962		33.6	0	0	1	1	2	7	7	7	8	8	11	
Nov 1962		54.3	2	2	2	3	3	4	5	5	7	8	15	2.
Dec 1962		57.5	0	0	1	2	3	5	5	6	8	11	20	2.
Year 1962		56.5	0	0	0	1	2	3	3	4	4	6	20	1.
Jan 1963		46.9	0	2	2	2	3	3	4	4	4	5	11	
Feb 1963		0.0		no valid data										
Mar 1963		0.0		no valid data										
Apr 1963		70.7	1	2	2	3	3	4	4	5	6	8	14	3.
May 1963		98.9	2	2	2	2	3	4	4	4	5	5	17	2.
Jun 1963		70.4	0	1	2	2	2	3	3	3	4	4	12	2.
Jul 1963		99.4	1	1	2	2	3	4	4	5	5	5	10	2.
Aug 1963		65.7	0	0	2	2	2	3	3	3	4	4	10	2.
Sep 1963		16.5	1	2	2	2	3	3	3	4	5	6	7	
Oct 1963		13.9	2	3	3	3	3	4	5	5	6	7	15	
Nov 1963		98.4	1	2	2	3	4	5	5	5	7	9	20	3.
Dec 1963		95.9	2	3	3	3	4	5	5	6	6	7	14	3.
Year 1963		56.8	0	2	2	3	3	4	4	5	5	6	20	2.
Two years 3/1/62 to 12/31/63	5 min	61.5	0	0	1	2	3	4	4	4	5	6	20	2.
	10 min		0	0	1	2	3	4	4	4	5	6	19	
	30 min		0	0	1	2	3	4	4	4	5	6	17	
	1 hr		0	0	1	2	3	4	4	4	5	6	17	
	4 hr		0	0	1	2	3	4	4	4	5	6	14	
	12 hr		0	0	1	2	3	4	4	4	5	6	10	
	24 hr		0	0	1	2	3	4	4	4	5	6	8	
Spring 1962	5 min	69.2	0	0	0	1	1	2	2	2	3	3	11	0.
Summer 1962		79.7	0	0	0	1	1	2	2	2	2	3	9	0.
Autumn 1962		56.2	0	1	2	3	3	5	5	6	7	8	15	2.
Winter 1962 1963		35.9	0	0	2	2	3	4	4	5	6	9	20	
Spring 1963		56.4	1	2	2	3	3	4	4	4	5	6	17	2.
Summer 1963		78.6	0	1	2	2	2	4	4	4	4	5	12	2.
Autumn 1963		42.6	1	2	2	3	3	4	5	5	6	8	20	

[a]Mean not computed because of insufficient valid data.



CENTER NUMBERS ARE
% OF MEAN
DURING CALMS

NOTE: TOTAL HYDROCARBON MINUS 1 PPM AS ESTIMATED MINIMUM METHANE BACKGROUND

SEASON	NUMBER OF VALID HOURS REPRESENTED																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
WINTER	98	24	26	35	14	8	19	30	170	57	60	45	44	93	155	132	43
SPRING	59	46	51	43	29	23	43	79	264	92	71	39	30	104	161	74	28
SUMMER	84	66	89	40	38	41	58	93	311	159	107	103	69	101	194	108	74
AUTUMN	31	45	58	30	14	9	7	43	157	91	37	35	47	122	101	58	45
TOTAL	272	181	274	148	95	91	127	245	902	399	275	222	190	420	611	372	190

Figure 2-29. Directional patterns of reactive hydrocarbon levels, 1963.

Carbon Monoxide

Carbon monoxide is produced by the incomplete combustion of any organic fuel. Almost all such fuel except gasoline is used in installations where combustion takes place with excess air and is relatively efficient; thus gasoline combustion in motor vehicles is the primary source of carbon monoxide pollution. Because the efficiency of combustion in motor vehicles varies widely with many factors, including vehicle maintenance, carbon monoxide emissions have not been estimated.

The expected seasonal pattern of carbon monoxide emissions would generally depend on the traffic patterns. During the colder months, automobile engines can operate more efficiently because the colder, denser air provides a higher, more efficient air-fuel ratio. Hence if most of the traffic in an area consisted of vehicles on long trips, with engines fully warmed up and operating efficiently, carbon monoxide emissions would be expected to decrease in the winter. On the other hand, if most of the traffic consisted of vehicles making short trips, with engines operating cold and probably partially choked, carbon monoxide emissions would tend to increase. It would be expected that the CAMP station in Washington, because of its location, would be influenced primarily by emissions from short-trip commuter traffic, and that carbon monoxide levels would tend to be higher during the winter months.

The monthly mean carbon monoxide concentrations in Figure 2-2 do not indicate any definite seasonal pattern, in large part because valid data were too sparse. The average diurnal variation patterns in Figure 2-30 do indicate somewhat higher carbon monoxide concentrations in winter.

The shapes of the diurnal patterns in Figure 2-30 indicate that the carbon monoxide levels varied in essentially the same manner as did most of the other pollutants, although the curves are somewhat erratic because of the small number of valid data. A distinct evening rush-hour peak is evident only in the winter curve, and the morning peak in the summer pattern was shifted 1 hour earlier than the peaks in the spring and autumn patterns because of the shift to Daylight Saving Time; each of these features is similar to the effects apparent in the nitric oxide and total hydrocarbon patterns.

Diurnal patterns of carbon monoxide concentrations on weekdays and Sundays are compared in Figure 2-31, and patterns for days with high winds and low winds from 6 to 8 a.m. are compared in Figure 2-32. As in the hydrocarbon patterns (Figures 2-26 and 2-27), the typical morning peak is essentially eliminated on Sundays and on days with high winds. The directional patterns of carbon monoxide in Figure 2-33 are

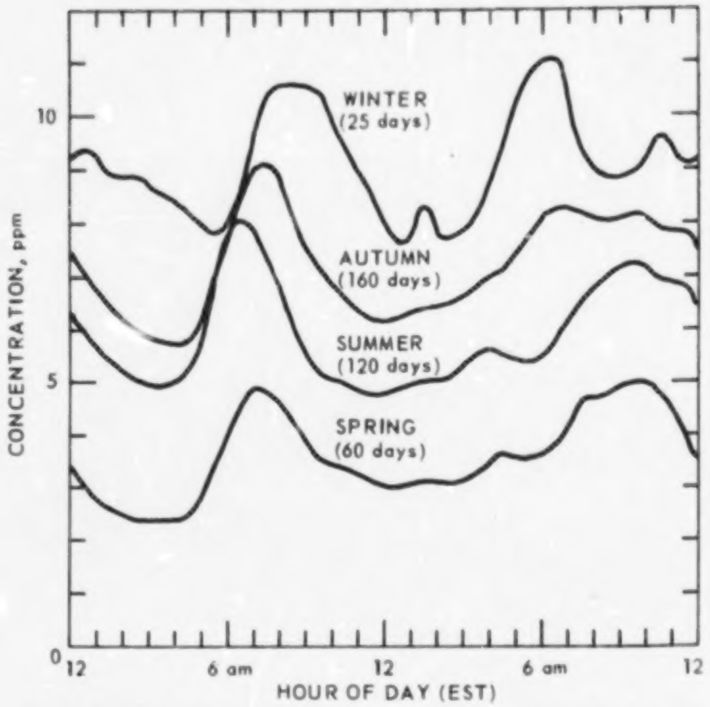


Figure 2-30. Diurnal variation of carbon monoxide levels by season.

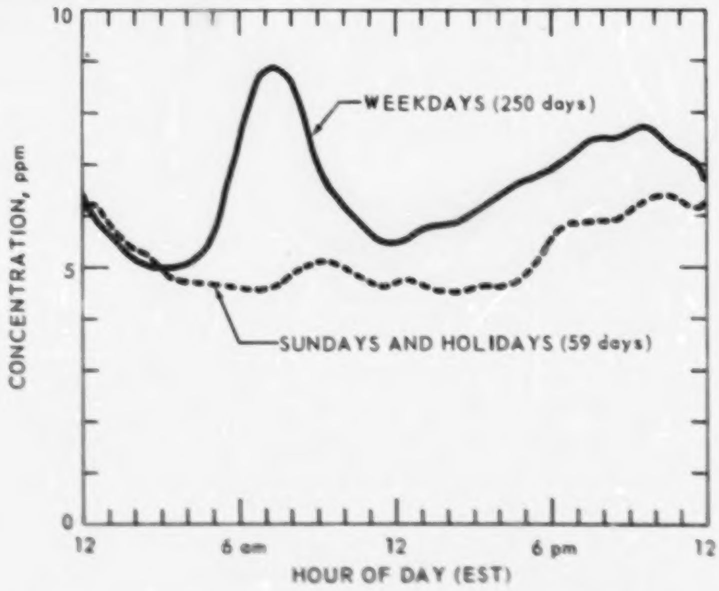


Figure 2-31. Diurnal variation of carbon monoxide levels on weekdays and Sundays.

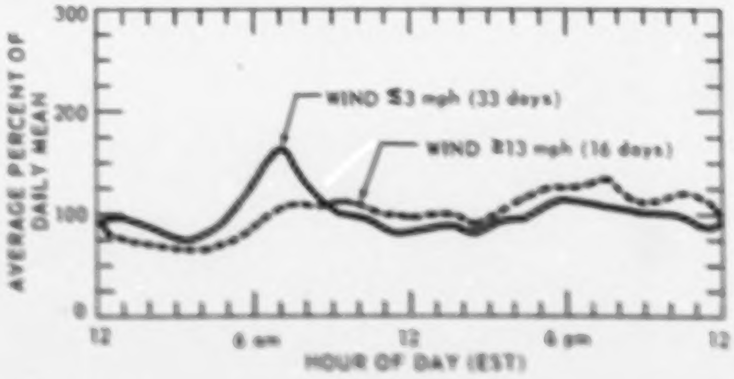
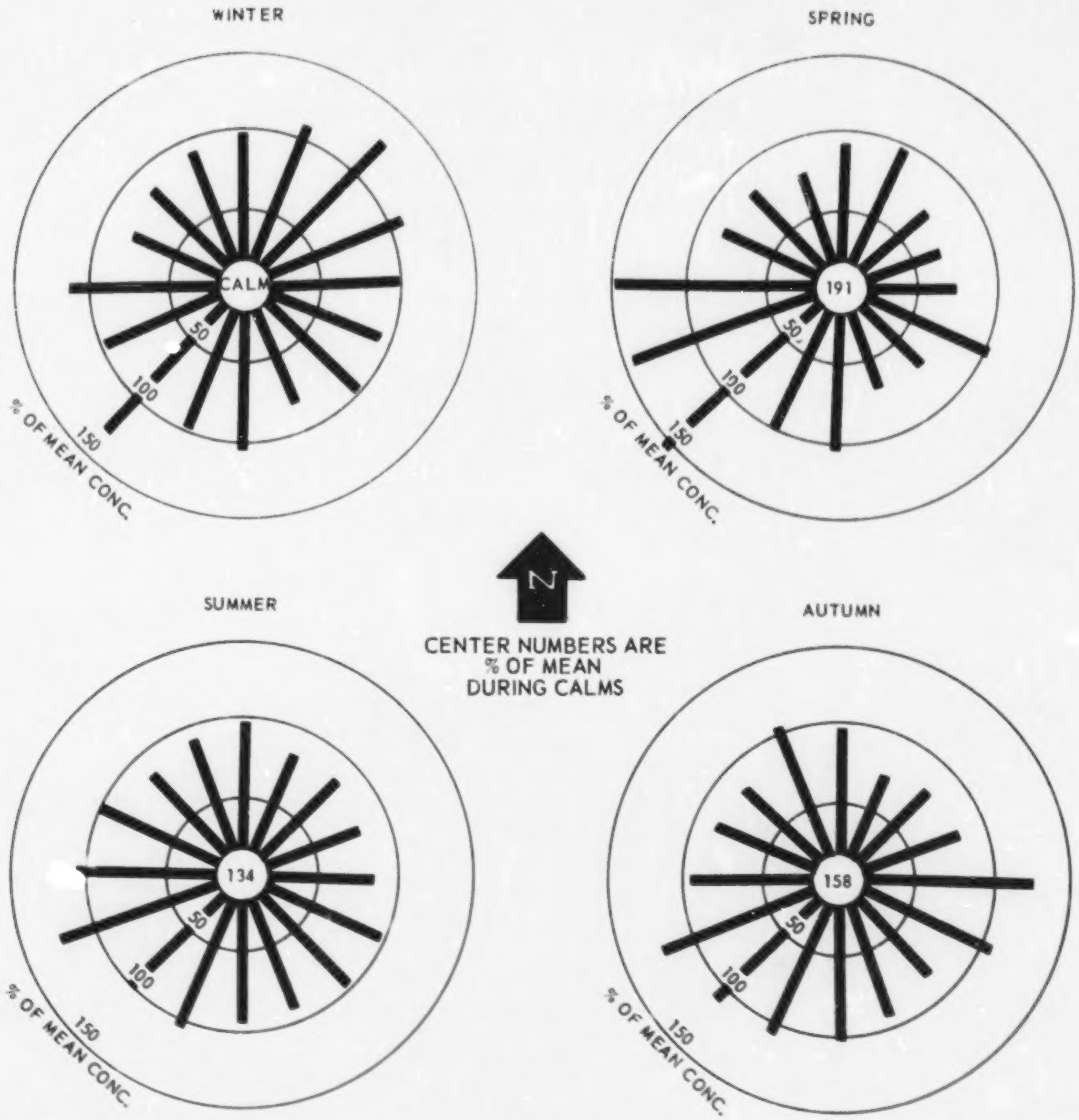


Figure 2-32. Effect of 6-8 a.m. wind speed on diurnal variation of carbon monoxide levels.



CENTER NUMBERS ARE
% OF MEAN
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SEASON	NUMBER OF VALID HOURS REPRESENTED																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
WINTER	68	22	27	18	19	9	23	18	88	13	11	13	23	33	59	35	0
SPRING	46	37	49	31	17	20	31	56	209	77	59	21	7	30	66	45	28
SUMMER	90	71	88	42	39	48	66	115	346	172	130	123	86	107	200	125	109
AUTUMN	145	144	155	75	37	29	34	106	290	182	121	117	71	153	147	158	131
TOTAL	349	274	319	166	112	106	154	295	933	444	321	274	187	323	472	363	268

Figure 2-33. Directional patterns of carbon monoxide levels, 1963.

also similar in many respects to the directional patterns of total hydrocarbon in Figure 2-29. These similarities reflect the common origin of the two pollutants in vehicular emissions.

Frequency distributions of the carbon monoxide data are presented in Table 2-10 and Figure 2-34. The only feature of particular note is the curve for November 1963; examination of Table 3-136 indicates several discrete periods of hourly mean levels in the range from 15 to 20 ppm; these produce the disproportionately high "bump" on the frequency distribution curve for November.

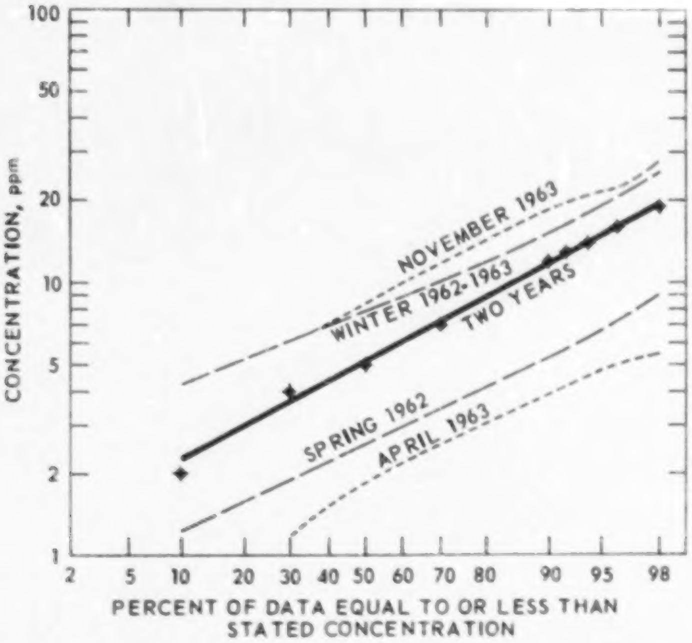

Figure 2-34. **Frequency distributions of 5-minute carbon monoxide data.**

Particulates

In addition to the six gases monitored at the Washington station, particulate pollution was measured during 1963. Figure 2-35 presents monthly mean soiling index values, total suspended particulate concentrations, and gross beta radioactivity levels of the particulate matter. Soiling index values, which primarily reflect the fine particulate matter in the air, exhibited a seasonal pattern similar to that of sulfur dioxide, suggestive of emissions from coal and oil consumption. The weight concentrations of the total suspended particulates, however, varied only slightly except for October, when a prolonged atmospheric stagnation occurred (October 15-22: see Table 3-148). The gross beta radioactivity level of the particulate matter exhibited distinct seasonal differences, with higher levels in the spring. This seasonal effect is typical of radioactive pollution originating from atmospheric experiments with nuclear weapons; such pollution is carried down from the upper atmosphere by seasonal changes in the upper winds during the winter season.

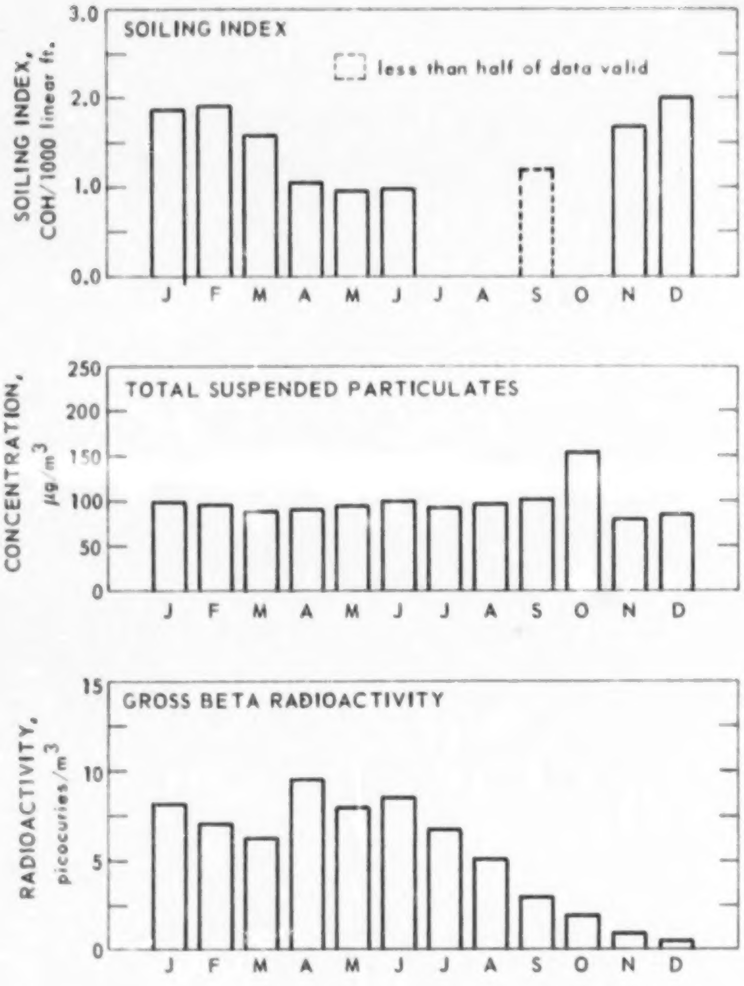

Figure 2-35. Monthly mean levels of particulate pollution, 1963.

Frequency distributions of the total suspended particulate concentrations and gross beta radioactivity data from the CAMP station are presented in Tables 2-11 and 2-12 and in Figures 2-36 and 2-37. Suspended particulate concentrations averaged 98 $\mu g/m^3$, about 15 percent lower than the average at the National Air Sampling Network site (Figure 1-6). This difference may have been partially due to a difference in the sampler shelters used at the two sites (See Appendix A).

The diurnal variation of the soiling index values is presented in Figure 2-38. Each seasonal pattern exhibited higher levels in the morning; the peak shifted in time somewhat with the seasons, but the 2-hour averages permit only the largest changes to be seen. Higher levels in the evening or overnight were less pronounced than the morning peaks, and did not follow an obvious pattern.

TABLE 2-10
FREQUENCY DISTRIBUTIONS OF CARBON MONOXIDE DATA

Period	Avg'g time	Percent of data used	Concentration, ppm											
			MIN	Frequency Distribution, %									Max	Arith mean
				10	30	50	70	90	92	94	96	98		
Jan 1962	5 min	0.0						no valid data						
Feb 1962		0.0						no valid data						
Mar 1962		0.0						no valid data						
Apr 1962		80.8	0	1	2	3	3	5	5	6	7	9	26	2.9
May 1962		4.5	3	3	4	5	5	7	7	7	7	7	11	a
Jun 1962		10.9	3	4	5	5	5	6	6	6	7	7	11	a
Jul 1962		36.8	0	4	5	7	9	12	12	13	13	14	20	a
Aug 1962		78.3	0	1	2	3	4	8	8	9	11	12	24	3.7
Sep 1962		75.1	0	3	5	7	8	11	11	12	14	19	24	6.9
Oct 1962		68.5	0	1	4	5	8	13	13	14	16	19	30	6.6
Nov 1962		88.9	0	2	4	5	6	8	9	10	13	15	29	5.1
Dec 1962		11.8	2	4	5	6	8	20	21	22	23	26	30	a
Year 1962		38.0	0	2	3	4	6	10	11	12	13	16	30	5.3
Jan 1963		23.7	4	6	8	9	10	13	14	14	15	16	22	a
Feb 1963		43.5	3	4	5	7	10	16	18	20	23	26	32	a
Mar 1963		0.0						no valid data						
Apr 1963		14.3	0	0	1	2	3	4	4	5	5	5	11	a
May 1963		97.6	0	2	3	4	5	7	8	9	10	13	27	4.3
Jun 1963		96.6	1	3	4	6	7	10	10	11	12	14	22	6.1
Jul 1963		96.9	0	2	4	5	6	10	10	11	12	15	33	5.4
Aug 1963		72.6	0	4	5	7	9	13	14	15	17	19	25	7.7
Sep 1963		98.9	0	1	2	4	6	8	9	10	11	13	24	4.6
Oct 1963		90.2	0	5	6	8	10	16	17	19	21	25	37	9.2
Nov 1963		98.7	0	4	6	8	12	19	20	21	22	28	44	10.3
Dec 1963		0.0												
Year 1963		61.2	0	2	4	6	8	13	14	15	18	21	44	7.0
Two	5 min	56.5	0	2	4	5	7	12	13	14	16	19	44	6.3
years	10 min		0	2	4	5	7	12	13	14	16	20	43	
4/1/62	30 min		0	2	4	5	7	12	13	14	16	19	41	
to	1 hr		0	2	4	5	7	11	12	14	16	19	41	
12/31/63	4 hr		0	2	4	5	7	11	12	13	15	19	37	
	12 hr		0	2	4	6	7	11	12	12	14	17	29	
	24 hr		1	3	4	6	7	10	11	12	14	16	23	
Spring 1962		28.2	0	1	2	3	3	5	6	6	7	9	26	a
Summer 1962		42.3	0	1	3	4	6	9	10	11	12	13	24	a
Autumn 1962		77.4	0	2	4	5	7	11	12	13	14	18	30	6.1
Winter 1962 1963		25.7	2	4	6	8	10	15	16	18	21	25	32	a
Spring 1963		37.6	0	1	3	4	5	7	8	8	10	13	27	a
Summer 1963		88.6	0	3	4	6	7	11	11	12	14	16	33	6.3
Autumn 1963		95.9	0	2	5	7	9	16	17	19	20	24	44	8.0

[a] Mean not computed because of insufficient valid data.

TABLE 2-11
FREQUENCY DISTRIBUTIONS OF SUSPENDED PARTICULATE DATA, 1963

	No. of samples	Concentration, $\mu g/m^3$													Std geo dev
		Min	Frequency distribution, %								Max	Arith mean	Geo mean		
			10	20	30	40	50	60	70	80	90				
Winter	77	45	64	69	75	81	87	92	99	114	126	272	92	88	1.37
Spring	82	48	61	72	78	83	88	93	99	110	126	165	92	88	1.31
Summer	84	59	65	72	80	87	92	96	105	115	128	229	96	93	1.30
Autumn	74	36	58	71	80	91	101	109	125	142	182	305	113	102	1.56
Year	317	36	63	71	78	84	91	96	106	118	139	305	98	92	1.39

TABLE 2-12
FREQUENCY DISTRIBUTIONS OF GROSS BETA RADIOACTIVITY DATA, 1963

	No. of samples	Concentration, picocuries/m^3													Std geo dev
		Min	Frequency distribution, %								Max	Arith mean	Geo mean		
			10	20	30	40	50	60	70	80	90				
Winter	39	0.2	0.3	0.5	0.6	0.7	0.7	0.8	0.9	6.9	7.8	10.9	2.6	1.2	3.40
Spring	82	1.5	3.3	4.4	6.5	7.4	8.2	8.8	9.5	10.5	12.1	15.8	8.0	7.1	1.67
Summer	84	1.4	3.2	4.4	4.9	5.4	6.0	7.0	7.9	8.9	10.7	21.4	6.8	6.1	1.63
Autumn	74	<0.05	0.6	0.9	1.1	1.3	1.8	2.1	2.4	2.8	3.6	4.7	2.0	1.5	2.26
Year	279	<0.05	0.7	1.3	2.3	3.5	4.7	6.1	7.5	8.6	10.4	21.4	5.3	3.5	2.86

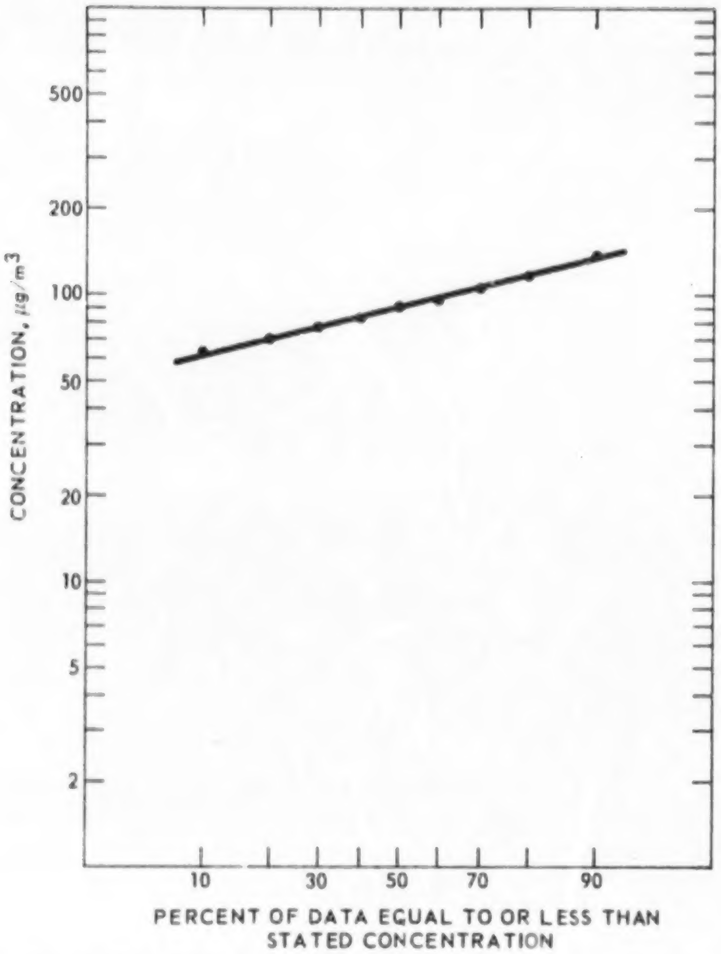

Figure 2-36. Frequency distribution of total suspended particulate data, 1963.

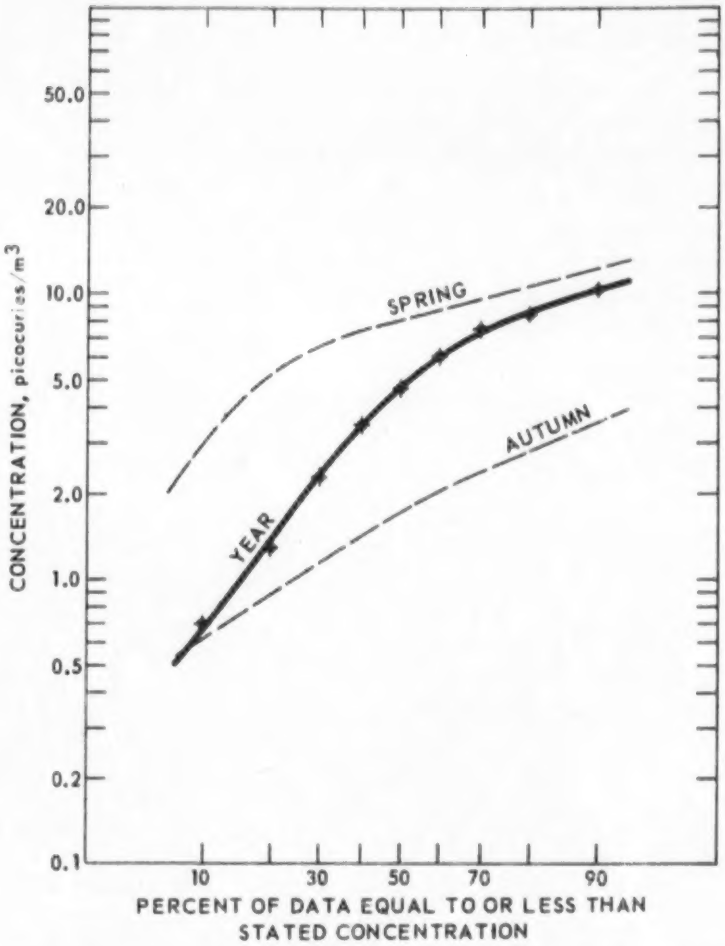

Figure 2-37. Frequency distributions of gross beta radioactivity data, 1963.

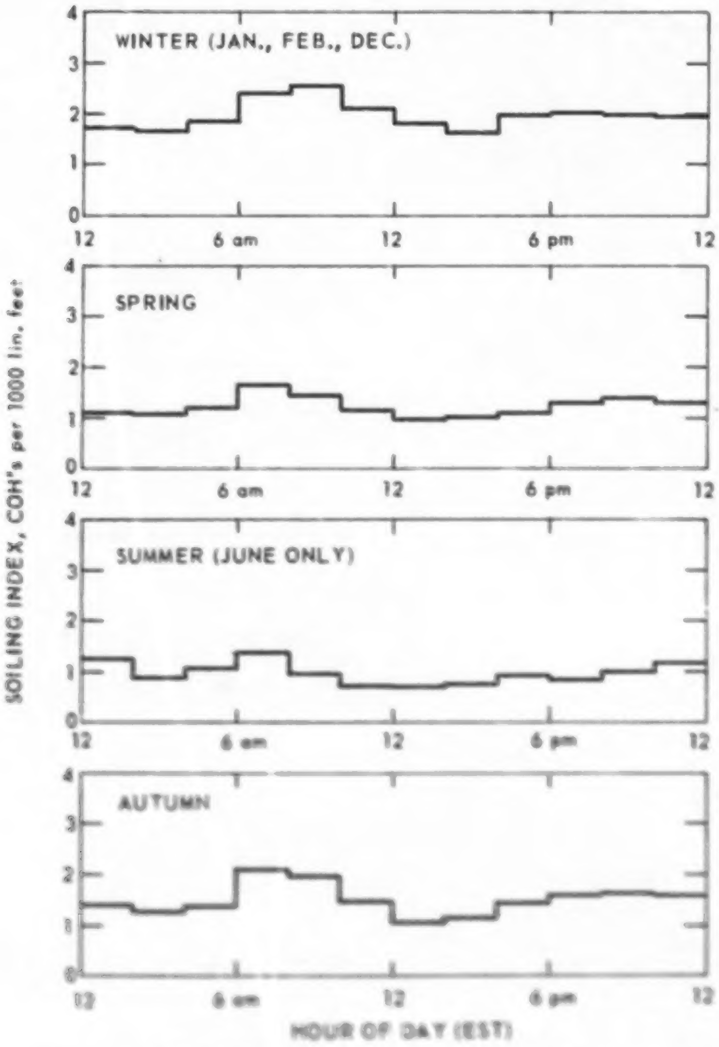

Figure 2-38. Diurnal variation of soiling index by season, 1963.

ATMOSPHERIC STAGNATIONS AND PHOTOCHEMICAL SMOG

The Eastern portion of the United States occasionally experiences the stagnation of an entire weather system, usually a warm high-pressure system or anticyclone, which tends to permit the accumulation of pollution to higher-than-normal levels. Such stagnations affected the Washington area on five occasions during 1962 and 1963. Two of these were extensive stagnations that covered much of the Eastern United States for prolonged periods; they included Washington from November 29 through December 4, 1962,* and from October 15 to 19, 1963. Figures 2-39 and 2-40 compare diurnal variation patterns compiled for these periods with "normal" patterns compiled for the months excluding the stagnation periods. There were no valid data during the 1962 stagnation for the oxides of nitrogen or total oxidant, and none for total hydrocarbon during the 1963 event

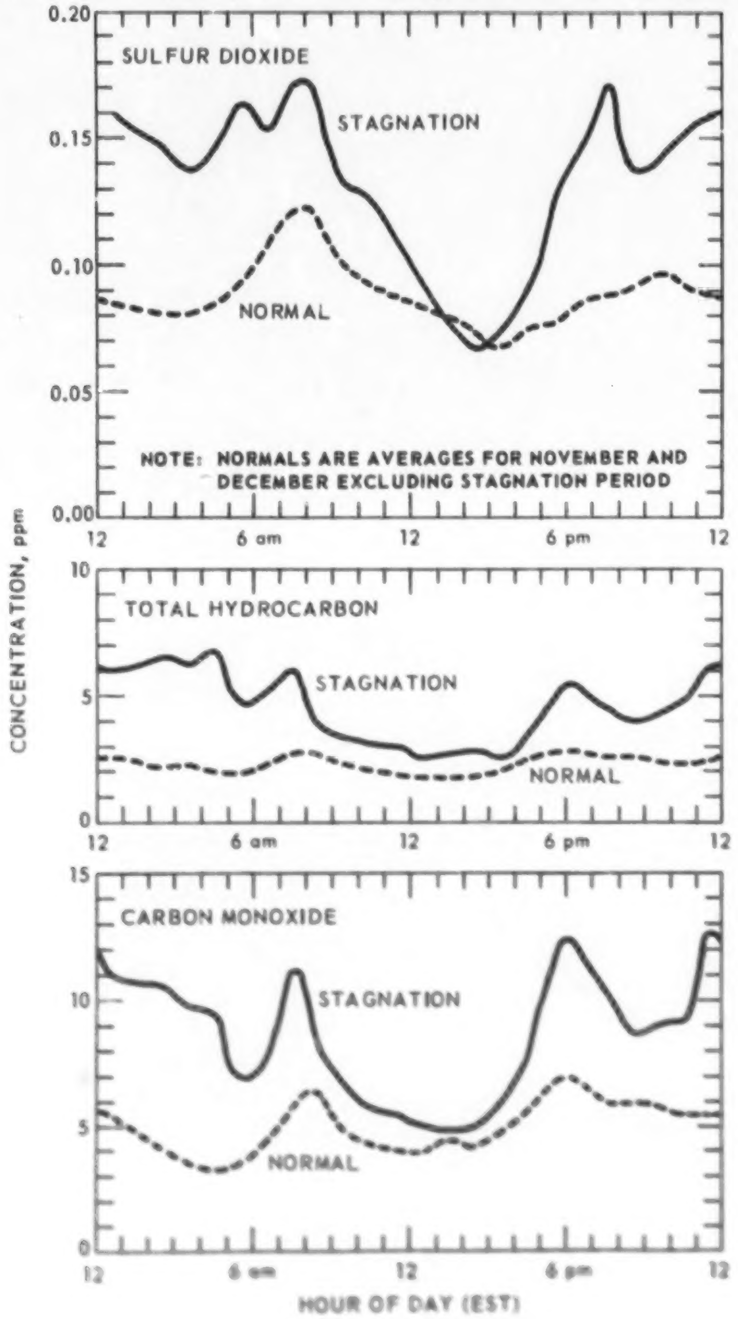

Figure 2-39. Diurnal variation of gaseous pollutant levels during 1962 stagnation (November 29 – December 4).

During the 1962 stagnation, pollutant levels were elevated primarily overnight; the afternoon minima were not drastically affected. Table 2-13 presents the stagnation-to-normal ratios of peak hour and daily mean concentrations. Note that during the stagnation the average levels of each of the three pollutants for the enitre day exceeded the peak hourly levels experienced normally.

During the 1963 stagnation (Figure 2-40) most pollutant levels were more severely increased, as shown in Table 2-14. Sulfur dioxide levels were only slightly increased, perhaps because emissions were lessened by reduced space heating in the relatively fair and warm weather during the stagnation period.

TABLE 2-13
COMPARISON OF STAGNATION AND NORMAL[a] POLLUTANT LEVELS, 1962 INCIDENT (NOVEMBER 29 TO DECEMBER 4)

Pollutant	Ratio of concentrations			
	Stagnation peak hour to		Stagnation daily mean to	
	Normal peak hour	Normal daily mean	Normal peak hour	Normal daily mean
Sulfur dioxide	1.4	1.9	1.1	1.5
Total hydrocarbon	2.4	2.9	1.6	2.0
Carbon monoxide	1.8	2.5	1.2	1.7

[a] Normal used is average for November 1-28 and December 5-31, 1962.

TABLE 2-14
COMPARISON OF STAGNATION AND NORMAL[a] POLLUTANT LEVELS, 1963 INCIDENT (OCTOBER 15 TO 19)

Pollutant	Ratio of concentrations			
	Stagnation peak hour to		Stagnation daily mean to	
	Normal peak hour	Normal daily mean	Normal peak hour	Normal daily mean
Sulfur dioxide	1.3	1.8	0.7	1.1
Nitric oxide	3.3	7.4	1.6	3.6
Nitrogen dioxide	2.6	3.4	1.4	1.8
Total oxidant[b]	2.1	6.9	0.7	2.2
Carbon monoxide	2.2	2.9	1.3	1.7

[a] Normal used is average for October 1963 excluding October 15-19.
[b] Not corrected for SO_2 interference.

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*This stagnation is described in greater detail in Reference 16.

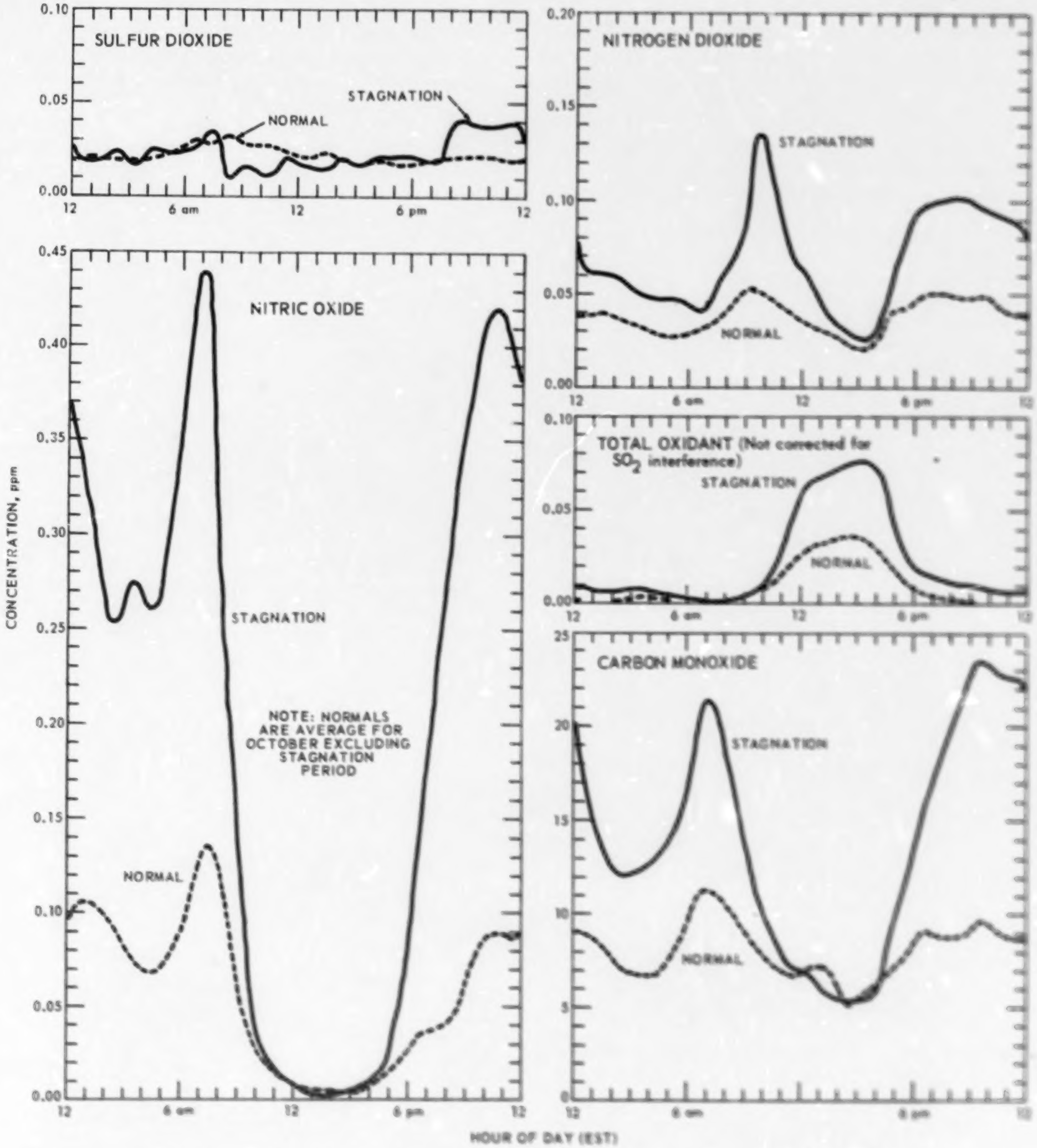
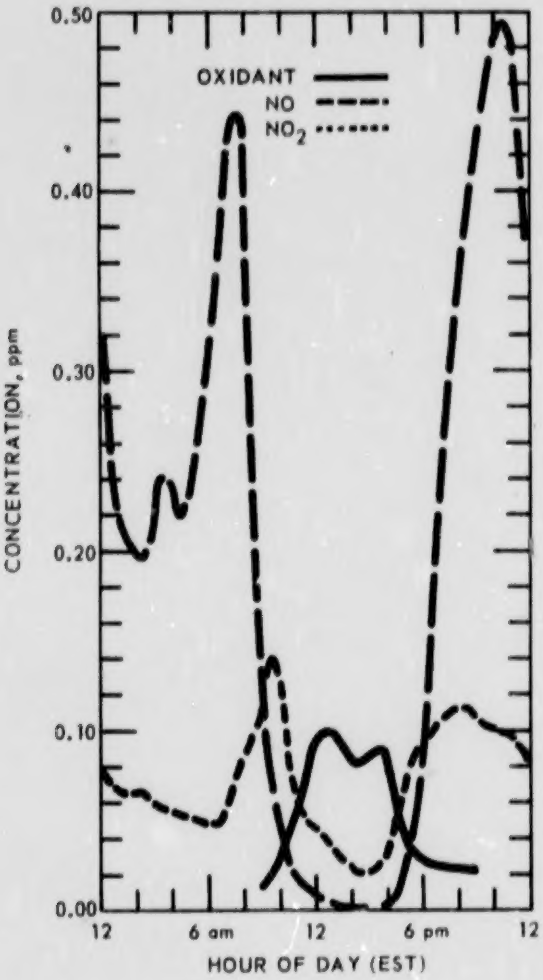


Figure 2-48. Diurnal variation of gaseous pollutant levels during 1963 stagnation (October 15 – 19).

The levels of nitric oxide, by contrast, were tremely exaggerated. The stagnation ineased pollutant levels most severely during the cturnal and morning hours, when nitric oxide vels are normally high; the very low inversion verely limited the dispersion of the peak nissions from rush-hour traffic.

In general, the 1963 stagnation increased the erage and peak pollutant levels to more than ce normal levels.

The high levels of nitric oxide during the 1963 gnation would be expected to fuel photoemical smog reactions, and in fact, the total dant levels were higher than normal. Figure 41 presents average diurnal patterns of data



ure 2.41. Formation of photochemical smog during October 1963 stagnation.

October 16, 17, and 19, the 3 days during stagnation when the sulfur dioxide interence could be eliminated from the oxidant a. The patterns together form a typical otochemical smog sequence, although data on lrocarbon concentrations were missing. The k nitric oxide levels at 8 a.m. and 10 p.m. re extreme; the nitrogen dioxide peak in the morning was also quite high. The morning peak of nitric oxide resulted from rush-hour traffic emissions into the limited volume of air. The nitrogen dioxide peak 2 hours later resulted from photochemical conversion of NO to NO_2; further photochemical reaction then produced the high oxidant levels in the afternoon. The shapes of the patterns in Figure 2-41 are typical of photochemical smog formation, although the nitric oxide peaks were unusually high. The oxidant levels were not the highest recorded, but were unusual for October.

The highest atmospheric levels of oxidant for the 2-year period occurred on 2 days in June 1963, shown in Figure 2-42. Data for these days also indicate a "classic" photochemical smog incident, although again the hydrocarbon data were missing. The peak morning levels of oxides of nitrogen were again occasioned by rush-hour traffic emissions, the more favorable atmospheric dilution in summer being reflected in the lower peak nitric oxide concentrations.

The differences in the oxidant levels in Figures 2-41 and 2-42 are notable. These differences were the result of the differences in solar radiation and temperature, as seen in Table 2-15, which presents meteorological data for the dates in question.

TABLE 2-15
METEOROLOGICAL DATA FOR SELECTED DAYS (WASHINGTON NATIONAL AIRPORT)

	June 26	June 27	Oct. 16	Oct. 17	Oct. 19
Sunshine, hr:min	14:53	14:52	10:35	10:10	10:15
Sunshine, % possible	100	100	95	91	93
Solar radiation,[a] calories/cm^2/day	730.6	722.7	383.9	353.0	356.2
Mean temperature,[b] °F	89.5	89.8	75.5	78.1	77.4
Max hourly temperature,[b] °F	91	93	82	83	82
Wind speed,[b] mph	8.8	11.3	7.2	6.3	4.9
Wind direction[b]	S-SSE	S-SSE	S-W	NW-N	NE

[a] Data from Sterling, Virginia.

[b] Mean for 10 a.m.-6 p.m.

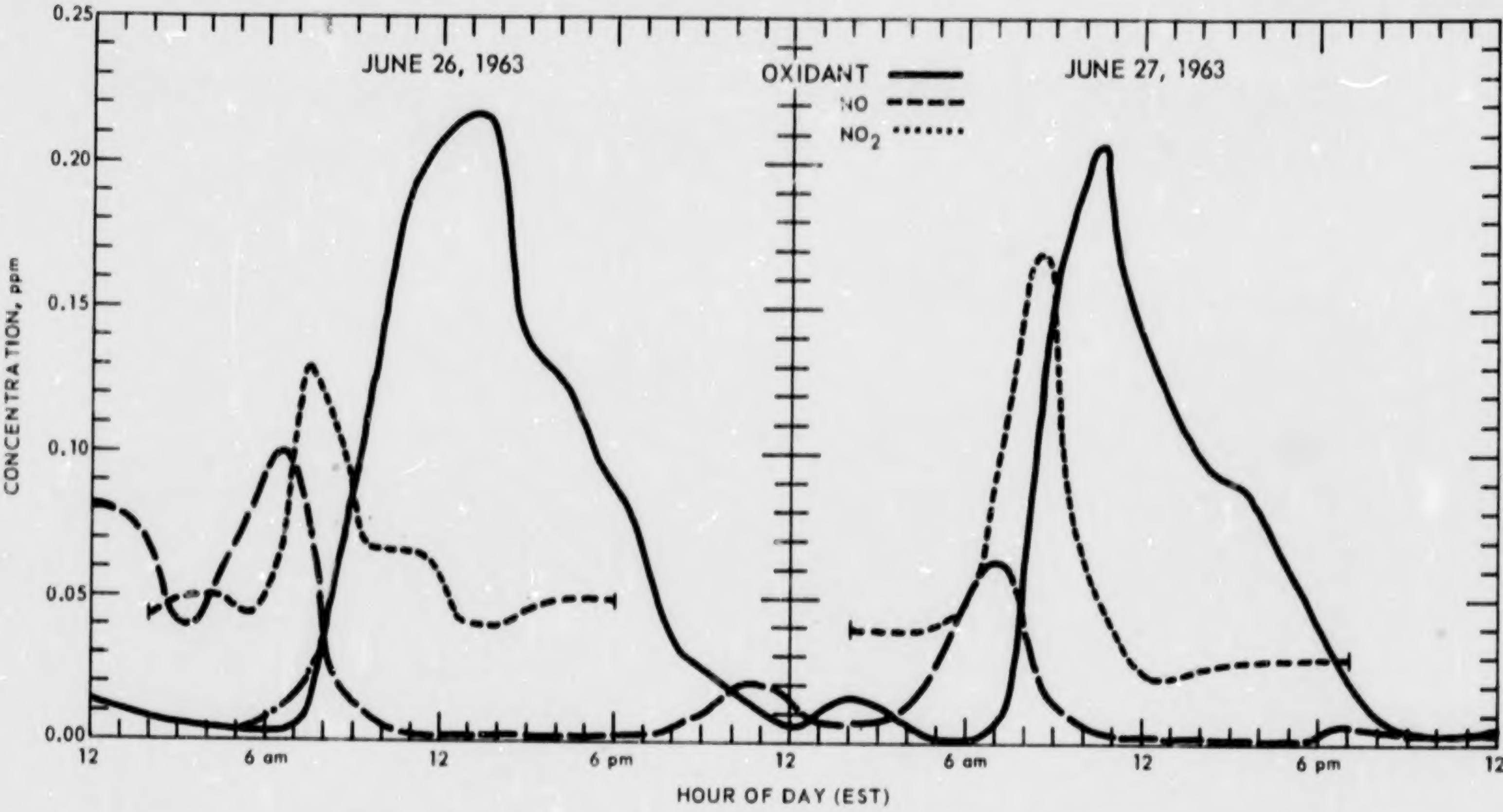


Figure 2-42. Formation of photochemical smog on June 26 and 27, 1963.

ADDITIONAL PERCENTILE CONCENTRATIONS FOR 1- AND 24-HOUR AVERAGING TIMES

Many air pollution control jurisdictions have adopted or are considering criteria against which to judge air quality, or upon which to base control legislation. These criteria are often based on averaging times other than 5 minutes and may well be based on percentiles higher than those available in the frequency distributions tabulated in the sections on indiviual pollutants. To facilitate comparisons of air quality in Washington with any such criteria, Table 2-16 presents the 99-percentile concentrations for 5-minute CAMP data and for 1-hour and 24-hour averaged data, and the 99.9-percentile concentrations for 5-minute and 1-hour data. Two years of data do not provide enough 24-hour averages for the 99.9-percentile to be meaningful, since 0.1 percent of 2 years time is less than one 24-hour averaging interval.

TABLE 2-16
99 AND 99.9 - PERCENTILE CONCENTRATIONS[a]

Pollutant	99th Percentile			99.9th Percentile	
	5-Min.	1-Hour	24-Hour	5-Min.	1-Hour
Sulfur Dioxide	0.22	0.21	0.17	0.35	0.33
Nitric Oxide	0.32	0.32	0.20	0.58	0.58
Nitrogen Dioxide	0.10	0.10	0.07	0.15	0.14
Total Hydrocarbon	7	7	7	13	13
Carbon Monoxide	22	22	19	32	32

[a] Total oxidant not included because of SO_2 interference.

Continuous
Air
Monitoring
Program

PART 3:
DATA TABLES

PART 3: DATA TABLES

The results of the first 2 years of CAMP operations in Washington are summarized in the following tables. Although it is intended that this volume can thus serve as a reference, the data are necessarily condensed; more detailed compilations are available. Any interested person or group can obtain further information by arrangement with the Chief of the Air Quality Section, Laboratory of Engineering and Physical Sciences, Division of Air Pollution, at the Robert A. Taft Sanitary Engineering Center.

GASEOUS POLLUTANTS

Table 3-1 lists and indexes those months for which valid data are available and for which summary tables are included. Tables 3-2 through 3-135 present hourly average concentrations by month for the gaseous pollutants. Values in these tables are the arithmetic means of the 5-minute values in the clock hour beginning at the time indicated. An average is not calculated if the hour is considered an invalid data hour, i.e., if fewer than seven 5-minute values were valid. Similarly, if a calendar day had fewer than 13 valid data hours, it is considered an invalid data day and the entire row of averages for that day is deleted. The reason for this procedure, which results in the loss of a few valid hourly averages, is that the data that are thus lost are usually concentrated at the beginning or end of the day. Since pollutant concentrations show considerable diurnal variation, the inclusion of data for such days would introduce a definite bias into the monthly mean concentrations.

The first summary line at the bottom of the tables (titled MONTHLY MEAN) contains the arithmetic means of the hourly averages, and hence represents the pattern of diurnal variation for the month. Again by the same validity criterion, this average is not calculated unless 16 or more hourly averages are present. The second and third summary lines are the number of and maximum of the hourly averages in the column.

The first summary column at the right of the tables (titled DAILY MEAN) is the arithmetic mean* of the 13 or more hourly averages comprising the row, and the second is the number of such valid hourly averages. The third summary column, however, is not the maximum hourly average for the day, but the maximum 5-minute value included in the hours of valid data during the day. The largest of these is not necessarily the maximum for the month if any valid hours have been deleted as part of an invalid day; the maximum 5-minute concentration during the month is best obtained from the tables of frequency distributions, which are compiled without considering the validity of any hour or day.

Two summary figures appear in the lower right corner. The first is the monthly average, an arithmetic mean, and appears only if 16 or more days were valid (a valid data month). The second is the total number of valid hours included in the table, which offers some basis for judging the representativeness of the monthly average. (A 31-day month has 744 possible hours; a 30-day month, 720; and a 28-day month, 672.)

SOILING INDEX

Tables 3-136 through 3-145 present soiling index values at the CAMP station by month. Each value was obtained from a 2-hour integrated sample beginning at the time indicated in the column heading. A missing value indicates that the sample was not taken or was invalid because of instrument malfunction.

The first summary line (titled MONTHLY MEAN) represents the arithmetic mean of the 2-hour average values in the column, and is calculated only if 16 or more days are represented. The first summary column (titled DAILY MEAN) is the arithmetic mean of the 2-hour values for the day; if fewer than seven such values are present, the daily mean is not calculated, and the data are not included in the summaries, but the component 2-hour values for the day are not deleted from the table as is done with the data on gaseous pollutants.

The other summary columns and rows are the number of and maximum of the respective 2-hour values. Three summary figures appear in the lower right corner; the mean and maximum value for the month are the upper left and lower right figures respectively, while the center figure is the total number of values. (A 31-day month could have 372 such values; a 30-day month, 360; and a 28-day month, 336.)

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*All the summary calculations in the tables are performed before the hourly averages are rounded.

SUSPENDED PARTICULATE MATTER

Tables 3-146 and 3-147 present the results of analyses of 24-hour particulate samples: the gross weight of suspended particulate matter and the gross beta radioactivity of the particulate matter, respectively. Each value represents a sample collected from about noon to noon, ending on the date indicated, with the exception of those indicated by asterisks; values so marked represent 48-hour samples, usually during a weekend, which are entered in the tables as identical values for 2 days. The summary row contains the arithmetic means of the various values for the month, including the duplicate pairs.

TABLE 3-1
INDEX TO DATA TABLES

Month	Sulfur Dioxide	Nitric Oxide	Nitrogen Dioxide	Total Oxidant	Total Hydrocarbon	Carbon Monoxide	Soiling Index	Suspended Particulates	Benzene-Soluble Organics	Gross Beta Radio-activity
	1 hour	1 hour	1 hour	1 hour	1 hour	1 hour	2 hours	24 hours	24 hours	24 hours
1962										
January	3-2	3-26	3-49	3-73	a	b	a	a	c	a
February	3-3	3-27	3-50	3-74	a	b	a			
March	3-4	3-28	3-51	3-75	3-97	b	a			
April	3-5	3-29	3-52	3-76	3-98	3-117	a			
May	3-6	3-30	3-53	3-77	3-99	3-118	a			
June	3-7	3-31	3-54	3-78	3-100	3-119	a			
July	3-8	3-32	3-55	3-79	3-101	3-120	a			
August	3-9	3-33	3-56	3-80	3-102	3-121	a			
September	3-10	3-34	3-57	3-81	3-103	3-122	a			
October	3-11	3-35	3-58	3-82	2-104	3-123	a			
November	3-12	3-36	3-59	3-83	2-105	3-124	a			
December	3-13	b	3-60	3-84	2-106	2-125	a			
1963										
January	3-14	3-37	3-61	3-85	3-107	3-126	3-136	3-146	c	3-147
February	3-15	3-38	3-62	3-86	b	3-127	3-137			
March	3-16	3-39	3-63	3-87	b	b	3-138			
April	3-17	3-40	3-64	3-88	3-108	3-128	3-139			
May	3-18	3-41	3-65	3-89	3-109	3-129	3-140			
June	3-19	3-42	3-66	3-90	3-110	3-130	3-141			
July	3-20	3-43	3-67	3-91	3-111	3-131	b			
August	3-21	3-44	3-68	3-92	3-112	3-132	b			
September	3-22	3-45	3-69	3-93	3-113	3-133	3-142			
October	3-23	3-46	3-70	3-94	3-114	3-134	3-143			
November	3-24	3-47	3-71	3-95	3-115	3-135	3-144			
December	3-25	3-48	3-72	3-96	3-116	b	3-145			

[a] Instrument not yet in operation

[b] No valid data because of instrument repair, calibration, etc.

[c] Benzene-soluble organic analyses not performed

TABLE 3-2 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, JANUARY 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON																											
2	TUE																											
3	WED																											
4	THU		9	8	7	9	8	20	10	9	13	17	18	9	7	5			5	8	9	7	8	8	7	9.5	21	27
5	FRI	6	6	6	5	5	4	5	7	8	9	8	7	9	11	11		15	14	18	18	23	20	20	13	10.8	23	27
6	SAT	15	13	11	10	10	12	11	10	9	13	13	14	15	15	12	12			14	18	23	15	6	3	12.4	22	28
7	SUN	4	2	2	3	2	2	3	3	3	2	2	3	3	3	4	3	3	5	5	5	4	4	4	3	3.2	24	9
8	MON	4	3	3	3	5	4	6	6	7	6	6	7	6	8	5	6	5	5	7	5	6	6	5	5	5.4	24	10
9	TUE	7	9	9	10	7	7	9	11	11	12	10	9	8	7	7	6	7	7	7	9	6	7	6	5	7.9	24	13
10	WED	5	5	6	6	6	7	12	13	12			10	11	11	11	10	8	9	10	10	9	9	9	8	8.8	22	15
11	THU	7	7	8	6	6	7	11	10	11	11	10	9	9	7			8	9	13	10	14	17	13	15	9.8	22	19
12	FRI	14	14	12	13	11	15	19	19	16	17	14	11	11	10	9	7	7	9	13	14	13	14	17	14	13.0	24	23
13	SAT	10	9	9	7	7	7	8	7	8	7	9	8	6	10	7	8	9	9	12	14	14	12	13	12	9.3	24	15
14	SUN	11	7	7	9	9	9	9	10	8	9	9	10	9	7	7	7	10	13	14	13	13	13	15	22	10.3	24	24
15	MON	21	17	19	14	10	13	11	17	17	23	23	23	8	7	8	9	7	7	11	8	6	6	5	6	12.3	24	26
16	TUE	5	6	5	7	8	7	13	13	13	13	10	10	9	9	8	7	6	8	10	11	15	14	14	13	9.8	24	18
17	WED	11	9	8	11	10	10	12	12	12			8	8	7	7		7	8	9	9	9	9	7	7	9.0	21	17
18	THU	7	7	7	7	8	10	9	10	9	6	7	10	9	8	8	8	7	6	9	8	9	8	10	7	8.1	24	17
19	FRI	8	12	12	14	15	13	15	14	12	13	12	11	11	10	8	8	9	10	13	15	16	18	17	16	12.5	24	22
20	SAT	16	14	15	14	14	16	15	15	16	19	20	19	14	11	8	8	9	9	11	11	11	11	11	10	13.2	24	26
21	SUN	8	8	12	13	14	16	15	15	13	11	11	10	10	11	11	9	10	12	14	12	10	8	6	5	11.0	24	18
22	MON	7	9	4	5	6	7	5	7	12		8	7	6	6	4	4	4	4	5	6	6	5	5	5	5.9	23	14
23	TUE	5	5	6	4	3	3	6	8	7	8	6	6	6	6	7	5	4	5	6	7	8	8	7	12	6.2	24	15
24	WED	12	8	9	10	10	11	11	11				9	14	10	8	8	8	8	7	8	8	8	11	10	9.4	21	18
25	THU	8	9	10	8	9	11	13	18	22	25	33	22	11	9	7	7	6	8	15	15	15	15	15	15	13.6	24	39
26	FRI	16	14	14	12	11	10	9	11	9	12	13	11	9	13	15	13	12	10	8	7	6	5	7	7	10.6	24	19
27	SAT	8	2	8	8	8	8	7	8	8	7	6	6	6	6	5	6	6	7	6	7	7	5	6	6	6.7	24	13
28	SUN	7	7	6	8	10	9	9	10	10	8	8	8	7	7	7	6	7	8	8	8	8	8	6	6	7.8	24	17
29	MON	6	6	6	7	7	11	12	12	13	13	11	11	10	9	8	8	9	8	7	10	10	10	8	8	9.1	24	15
30	TUE	7	7	6	8	6	7	9	10	9	15		12	12	10	9	7	5	4	4	4	4	4	4	5	7.3	23	18
31	WED	5	4	4	4	4	6	10	12	10	8				8	8	9	9	9	11	14	14	10	8	9	8.4	21	17
MONTHLY MEAN		9	8	8	8	8	9	10	11	11	12	12	11	9	9	8	8	8	8	10	10	10	10	9	9	9.3		
NO. OF DAYS		27	28	28	28	28	28	28	28	27	24	23	27	27	28	27	24	26	27	28	28	28	28	28	28		651	
MAX.HRLY MEAN		21	17	19	14	15	16	20	19	22	25	33	23	15	15	15	13	15	14	18	18	23	20	20	22			

TABLE 3-3 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, FEBRUARY 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU	8	8	8	11	10	10	17	21	20	21			12	11	10	11	10	11	10	12	13	15	11	11	12.2	22	26
2	FRI	11	13	13	14	13	15	16	15	16	19	19	19	17	15			12	14	15	14	14	16	17	18	15.2	22	21
3	SAT																											
4	SUN																											
5	MON																											
6	TUE																											
7	WED																											
8	THU											13	12	12	13	10	10	10	11		13	15	13	16	16	12.7	13	20
9	FRI	15	15	19	19	21	20	19	21	18	22	16	13	13	13	13	13	13	11	13	15	22	15	13	12	16.0	24	28
10	SAT	13	13	13	14	14	12	12	12	11	12	12	11	11	11	10	10	11	11	14	14	14				12.1	21	17
11	SUN																											
12	MON		15	15	14	14	12	15	15	16	17	14	15	14			13	13	17	20	20	19	19	19	18	15.8	21	22
13	TUE	22	20	20	21	22	23	31	25	20	21	25	23	14	14	11		13	12	13	12	14	15	13	13	18.1	23	35
14	WED	14	13	12	13	14	15	14	14	17				8	7	6	5	3	3	4	4	5	5	4	2	8.5	21	20
15	THU	2	2	1	2	2	4	12	14	9	8		9	7	6	5	4	3	4	6	8	7	9	8	7	6.1	23	19
16	FRI	7	6	6	6	6	7	8	11	10	8	9	8	7	7	6	5	8	11	7	9	12	14	8	9	8.0	24	21
17	SAT	7	9	9	11	12	14	13	13	10	10	7	3	3	4	3					7	8	8	6	6	8.0	20	18
18	SUN	5	5	7	7	8	10	11	8	6	5	5	3	3							6	7	7	8	8	6.6	18	14
19	MON	7	6	4	4	4	5	5	9	9	9	10	9	9	9	13	11	12	5	6	7	7	9	7	6	7.6	24	19
20	TUE	7	7	9	3	2	4	6	8	8	7	6	8	6	6	5		6	6	7	7	8	9	8	8	6.5	23	11
21	WED	9	9	8	7	7	7	8	12	10			10	10	8	6	6	6	6	7	8	7	8	8	7	8.0	22	14
22	THU	8	6	6	8	9	10	11	13	11	11	11	10	12	12	12	14	14	13	12	10	14				10.6	21	19
23	FRI		15	15	13	13	12	12	12	13	18	18	16	15	11	9	10	12	11	10	12	11	10	7	6	12.2	23	19
24	SAT	6	5	5	7	6	11	14	10	14	11	9	5	4	6	6	5	5	6	6	6	6	6	7	6	7.2	24	17
25	SUN	6	5	5	4	6	6	7	10	7	6	5	5	5	4	6	5	6	6	6	5	6	5	4	4	5.5	24	12
26	MON	4	4	5	5	6	7	8	9	9	10	16	13	12	11	7	7	6	8	11	12	11	10	16	16	9.1	24	20
27	TUE	11	8	7	9	9	10	9	14	21	11	13	11	11	11	8			16	16	15	10	7	6	4	10.8	22	24
28	WED	4	6	5	5	5	4	5	6	6			9	12	9	9	8	8	8	7	7	7	6	7	6	6.7	22	16
MONTHLY MEAN		9	9	9	9	10	10	12	13	12	12	12	11	10	9	8	8	9	10	10	10	11	10	10	9	10.1		
NO. OF DAYS		19	21	21	21	21	21	21	21	21	18	17	20	22	20	19	16	19	20	19	22	22	20	20	20		481	
MAX.HRLY MEAN		22	20	20	21	22	23	31	25	21	22	25	23	17	15	13	14	14	17	20	20	22	19	19	18			

TABLE 3-4 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, MARCH 1962

DAY OF MONTH	DAY OF WEEK	A M 12	1	2	3	4	5	6	7	8	9	10	11	P M 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO. OF HR	5-MIN MAX
1	THU	6	6	5	5	4	5	12	11	10	10	8	8	8	7	7	5	5	5	6	6	7	6	5	5	6.7	24	15
2	FRI	4	4	5	4	4	5	6	6	5	7	5	4	5	6	5	4	5	4	6	7	8	8	8	6	5.5	24	11
3	SAT	5	5	5	6	4	6	5	6	5	4	5	4	4	3	3	3	3	3	5	8	8	8	9	9	5.2	24	11
4	SUN	10	7	7	8	9	8	7	5	4	4	5	6	10	6	4	5	7	9	8	10	10	9	8	9	7.2	24	14
5	MON	9	7	7	6	8	11	11	11	8	8	8	8	6	10	12	8	6	5	6	5	5	6	8	6	7.6	24	15
6	TUE	5	4	3	3	3	4	6	6	4	4	5	5	5		7	4	7	5	5	4	4	4	4	3	4.4	23	8
7	WED	3	3	3	3	3	3	6	7	5				4	5	5	4	5	5	9	11	12	13	12	9	6.2	21	14
8	THU	10	9	8	11	8	10	13	12	10	10	7	5	5	6	8	7	5	6	8	8	9	11	7	5	8.2	24	18
9	FRI	5	5	5	7	11	14	11	15	14	9	6	6	5	8	11	11	13	11	10	11	8	10	9	9	9.3	24	20
10	SAT	7	7	9	11	13	14	15	13	11	12	12	11	10	8	8	7	5	6	7	9	13	16	12	13	10.3	24	20
11	SUN	12	10	9	9	9	8	8	9	8	7	5	5	4	4	5	5	5	5	5	4	4	4	5	4	6.5	24	14
12	MON	4	5	5	6	6	9	10	13	13	14	11	10	9	6	7	9	7	6	10	14	13	18	21	19	10.1	24	28
13	TUE	15	6	7	6	6	9	15	18	16	15	11	8	7	8	6		5	3	3	6	5	4	5	4	8.2	23	29
14	WED	4	3	3	3	2	3	12	10	6				6	7	6	6	5	5	5	6	6	6	6	7	5.7	21	15
15	THU	6	6	5	4	5	7	15	15	12	10	8	8	6	7	5	5	5	5	8	9	9	9	7	7	7.4	24	20
16	FRI	8	6	7	8	7	7	15	19	16	11	8	7	7	6	6	4	3	5	6	5	4	5	5	4	7.3	24	24
17	SAT	4	3	2	2	3	5	5	6	5	3	3	2	2	1	1	2	2	5	6	6	6	6	7	6	3.8	24	9
18	SUN	4	2	2	2	2	4	5	4	2	2	1	3	2	4	3	2	2	2	4	6	9	10	12	13	4.3	24	18
19	MON	10	10	9	7	12	13	14	19	16	11	5	5	5	5	4	4	3	3	8	6	4	4	4	3	7.7	24	25
20	TUE	3	1	3	3	4	7	13	14	10	7	6	6	4	4	3										5.9	15	17
21	WED																											
22	THU																											
23	FRI																											
24	SAT	5	3	3	3	2	6	10	7	3	2	1	1	1	2	1	1	1	1	1	2	3	4	5	6	3.1	24	11
25	SUN	4	2	1	2	2	3	4	4	5	5	5	3	1	1	1	1	1	2	3	6	10	8	4	3	3.3	24	11
26	MON	3	3	3	2	6	8	9	6	3	4	3	3	2	1	1	1	1	2	2	5	9	9	3	2	3.9	24	12
27	TUE	2	2	2	3	5	11	20	20	11	6	5	3	3	3	3	2	1	1	2	4	4	4	5	2	5.2	24	26
28	WED	2	2	5	5	6	11	19	20		7	4	3	3	3	3	2	2	2	2	7	6	5	6	4	5.7	23	27
29	THU	4	4	4	3	3	6	6	7	5	5	5	6	4	2	3			4	4	3	3	3	2	2	4.0	22	9
30	FRI	2	2	1	1	2	4	5	3	2	3	3	3	2	4	1	2	2	2	2	2	4	2	1	1	2.4	24	5
31	SAT	1	2	3	4	6	2	1	1	2	2	2	2	1	1	2	1	1	2	2	1	3	2	1	1	1.9	24	8
MONTHLY MEAN		6	5	5	5	6	7	10	10	8	7	6	5	5	5	5	4	4	4	5	6	7	7	7	6	6.0		
NO. OF DAYS		28	28	28	28	28	28	28	28	27	26	26	26	28	27	28	25	26	27	27	27	27	27	27	27		652	
MAX. HRLY MEAN		15	10	9	11	13	14	20	20	16	15	12	11	10	10	12	11	13	11	10	14	13	18	21	19			

TABLE 3-5 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, APRIL 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	1	1	1	2	1	4	2	3	1	2	5	3	2	1	2	2	2	3	5	3	2	3	2	2	2.3	24	8
2	MON	2	2	2	3	5	5	7	8	6	6			4	4	4	5	4	3	4	6	6	8	9	7	4.9	22	12
3	TUE	6	4	4	4	4	6	7	5	4	4	4	4	4	6	4	4	4	3	3	4	6	8	15	15	5.5	24	19
4	WED	12	12	11	13	16	15	19	21	17	7		7	6						5	5	6	7	5	4	10.4	18	25
5	THU	4	4	5	5	5	6	8	5	5	5	4	3	4	3	3	3		4	5	6	5	5	4	4	4.6	23	10
6	FRI	4	4	4	4	5	5	7	11	11	8	6	5	4	5	4	4	3	3	2	3	5	4	2	2	4.8	24	17
7	SAT	3	2	2	2	3	3	3	3	4	6	3	5	4	3	3	3	3	5	6	6	5	4	4	4	3.7	24	8
8	SUN	5	4	5	5	5	6	6	6	4	5	6	8	7	6	5	4	5	5	6	8	7	8	7	7	5.8	24	11
9	MON	6	5	5	6	6	7	6	11	9	7		4	5	5	6	5	5	3	2	3	3	3	4	4	5.2	23	14
10	TUE	4	4	3	2	3	5	8	7	5	5	5	4	4	3	3	3	3	3	4	5	7	9	6	3	4.5	24	10
11	WED	5	7	8	9	7	12	11	15					6	6	5	5	5	6	6	5	4	5	4	5	6.9	20	17
12	THU	4	5	5	4	3	4	6	8	7	5	5	5	6	6	6		3	2	2	2	2	3	3	3	4.3	23	10
13	FRI	3	2	2	3	4	4	6	6	8	10	11	7	4	5	3	3	3	2	3	2	2	3	2	2	4.0	24	14
14	SAT	2	2	1	1	1	2	3	3	3	2	3	2	2	2	2	2	2	1	2	3	6	7	5	6	2.7	24	9
15	SUN	3	3	3	3	2	4	4	2	2	2	3	3	3	1	1	1	1	1	2	3	3	2	2	2	2.3	24	6
16	MON	2	3	2	2	2	4	5	7	6	6		6	6	7	6	5	3	2	3	5	5	5	4	4	4.4	23	9
17	TUE	4	3	3	2	4	6	10	9	7	7	5	5	5	6	5	3	3	3	4	7	6	7	9	7	5.4	24	14
18	WED	5	6	7	6	5	8	14	8	7	5		3	3	3	3	3	3	2	4	6	6	5	7	8	5.5	23	21
19	THU	6	7	6	6	6	6	8	14	9	5	4	5	3	2	2	2	1	1	2	2	1	1	1	2	4.2	24	22
20	FRI	3	1	2	3	2	2	5	6	6	5	3	4	3	3	3	2	7	5	6	6	7	15	9	7	4.8	24	21
21	SAT	6	5	7	7	6	8	9	7	5	3	2	1	1	1	1	1	1	1	1	2	4	5	5	4	3.8	24	10
22	SUN	3	3	2	2	2	2	5	3	3	2	3	4	1	1	1			1	1	2	4	8	7	3	2.9	22	9
23	MON	3	2	2	4	3	3	4	5	5	3	2	1	1	1	0		1	0	1	1	1	1	1	1	2.0	23	7
24	TUE	1	1	1	3	4	5	10	7	5	3	2	1	1	2	2	2	1	1	1	2	4	7	6	5	3.2	24	11
25	WED	4	5	4	5	6	7	6	4	4	4		2	2	2	1	2	1	1	1	6	4	4	3	2	3.5	23	10
26	THU	3	1	1	2	3	3	3	6	8	8			0							1	0	3	0		2.8	15	9
27	FRI										0	2	2	1			1	1	0	3	4	3	2	0	2	1.6	13	7
28	SAT	2	1	0	1	1	1	2	2	0	1	1	1	0	0	0	0	1	2	2	2	1	1	0		0.9	23	3
29	SUN	1	1		1	0	1		1		1	1	1		0		0	2	2	0						0.7	14	4
30	MON																											
MONTHLY MEAN		4	4	4	4	4	5	7	7	6	5	4	4	3	3	3	3	3	2	3	[illegible]	4	5	5	4	4.1		
NO. OF DAYS		28	28	27	28	28	28	27	28	26	28	21	26	28	26	25	24	25	27	28	28	28	28	28	26		644	
MAX.HRLY MEAN		12	12	11	13	16	15	19	21	17	10	11	8	7	7	6	5	7	6	6	8	7	15	15	15			

TABLE 3-6 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, MAY 1962

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	TUE																											
2	WED																											
3	THU	1	1	1	1	2	1	3	9	11	8	5	4							1	1	1	1	1	3	3.1	18	15
4	FRI	3	3	2	2	2	3	3	3	2	1	2		2	1	1	1	1	1	1	1	1	1	1	2	1.7	23	4
5	SAT	1	1	1	1	2	3	7	7	4	1	1	1	1	1	1	0	0	0	1	1	1	2	3	2	1.8	24	11
6	SUN	1	1	2	2	2	2	4	3	2	2	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1.2	24	5
7	MON	1	1	1	1	1	1	5	4	1			1	1	1	1	0	0	1	1	2	3	3	2	1	1.5	22	10
8	TUE	1	2	2	3	2	1	1	1	1	1	1	2	1	1	2	4	3	4	4	4	4	2	2	3	2.1	24	5
9	WED	3	3	4	4	2	2	2	2	2	2	1		1	1	1	1	1	1	1	2	2	4	4	4	2.2	23	6
10	THU	5	2	1	2	3	7	10	7	4	4	3	3	2		1	1	1	1	2	1	1	1	1	1	2.9	23	13
11	FRI	1	1	1	2	2	2	2	3	2	1	1	2	2	1	1	3	2	2	3	2	1	1	1	1	1.6	24	4
12	SAT	1	1	2	4	3	2	4	3	1	1	1	2	1	0	0	0	0	0	1	1	1	1	1	0	1.4	24	5
13	SUN	0	1	1	1	1	1	2	1	2	3	2	1	1	0	1	1	1	1	0	0	1	1	1		1.0	23	3
14	MON				0	0	2	2	3	3	1		1	1	1	3	2	2	1	1	1	1	2	1	1	1.5	20	4
15	TUE	1	2	3	3	4	4	12	6	4	2	1	1	1	1											3.1	14	14
16	WED		0		0	0			1	1					3	2	2	1	0	0	0	0	0	0	1	0.7	16	4
17	THU	1		1		0	1	0		2	2	1	2	3	1	1	0	0	3	2	0	1	1	1	0	1.0	21	11
18	FRI		0			0	1	3	1	0	0	0								0	2	3	2	3	3	1.3	14	4
19	SAT	1	1	1	1	1	0	1	1	1	0	0	0	1	0	0	0			0	0	0	1	1	1	0.5	22	2
20	SUN	0	0	0	0	0	0	0	0	0					0	0	0	0	0	0	0	0	0	1	1	0.1	20	1
21	MON	1	1	1	0	1	1	2	5	3			2	2	2	1	1	1	1	1	1	1	1	1	0	1.3	22	5
22	TUE								1	2	2	1	1	1			1	1	0		0	0	1	1	1	0.8	14	2
23	WED	0						1	4	5	4			0	1	1	1	0	0	0	1	0	1	1	0	1.1	17	8
24	THU	0	0	1	1	0	1	1	1	1	1	1	1	0	0	0	0				1	0	1	1	1	0.6	21	3
25	FRI	0	0	0	1	2	2	3	2	2	1	1	0	0	0							0	2	0	2	1.1	18	6
26	SAT																											
27	SUN						1	1	1	1	2	1	1	1	1	1							1	0	1	0.9	13	2
28	MON																											
29	TUE											1	1		1	1	1	0	1	1	1	1	1	1	1	0.9	13	1
30	WED	0	1	1	1	1	1	1	2	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	0.7	24	2
31	THU	1	1	1	1	1	1	1	2	1	1	1	2	1	1	1	2	1	2	1	1	1	1	1	1	1.2	24	6
MONTHLY MEAN		1	1	1	1	1	2	3	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.4		
NO. OF DAYS		21	21	20	21	23	23	24	25	26	22	21	21	22	23	22	22	20	20	22	24	25	26	26	25		545	
MAX.HRLY MEAN		5	3	4	4	4	7	12	9	11	8	5	4	3	3	3	4	3	4	4	4	4	4	4	4			

TABLE 3-7 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, JUNE 1962

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI	1	1	1	1	2	2	4	7	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.6	24	11
2	SAT	1	1	1	1	1	3	4	5	4	1	1	2	1	1	1	0	1	1	1	3	2	1	1	1	1.6	24	10
3	SUN	2	3	2	2	4	4	3	2	1	1	2	2	2	2	2	3	2	1	1	1	1	1	1	1	1.9	24	5
4	MON	1	2	2	1	1	1	1	1	2	1	1	1			1	1	1	1	0	0	0	1	1	0	0.9	22	3
5	TUE	1	1	1	1	1	1	2	4	2	1	1	1	1		0	0	1	1	0	0		0	0	0	0.9	22	6
6	WED		0	0	0	0	2	1	1	0			0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	21	2
7	THU	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0.6	24	2
8	FRI	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.8	24	4
9	SAT	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1.0	24	3
10	SUN	1	0	1	1	1	3	1	1	0	0	0	0	1	1	0	0	0	1	0	0	0	1	1	1	0.6	24	4
11	MON	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	0	1.1	24	3
12	TUE	0	0	0	1	1	1	1	1	1			1	1		1	1	1	1	1	1	1	0	0	0	0.7	21	4
13	WED	0	0	0	0	1	1	1	1	1	1	1	1				1	1	1	1	1	1	1	1	1	0.8	21	2
14	THU	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0.9	24	2
15	FRI	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	2	1	1	1	1.0	24	2
16	SAT	1	1	2	3	4	3	2	2	1	1	1	1	1	1	1	1	0	1	1	1	2	3	2	2	1.6	24	5
17	SUN	2	1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	2	2	2	2	1.5	24	4
18	MON																											
19	TUE										1	1	1	1		1	1	1	1	1	1	1	1	1	1	1.0	14	1
20	WED	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0.1	23	1
21	THU																											
22	FRI												1	1	1	1	1	0	0	1	1	0	0	0	0	0.5	13	1
23	SAT	0	0	0	0	0	1	0					0	0	0	0	0		0	0						0.1	14	1
24	SUN																											
25	MON																											
26	TUE																											
27	WED																											
28	THU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	0
29	FRI	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	24	2
30	SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	3
MONTHLY MEAN		1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8		
NO. OF DAYS		21	22	22	22	22	22	22	21	21	20	20	24	22	19	23	23	23	24	24	23	22	23	23	23		531	
MAX.HRLY MEAN		2	3	2	3	4	4	4	7	4	2	2	2	2	2	2	3	2	2	1	3	2	3	2	2			

TABLE 3-8 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, JULY 1962

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	24	3
2	MON	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0.0	22	2
3	TUE	0	0	0	0	0	0	0	0	1	2	2	1	0	0				0	0	0	0	0	0	0	0.3	21	8
4	WED	0	0	0	0	0	0		0	0	0	0	0	0	0	0							0	0	0	0.0	17	0
5	THU	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	24	3
6	FRI	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	24	4
7	SAT	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.1	24	2
8	SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	1
9	MON	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0.2	24	5
10	TUE	0	0	0	0	0	1	1	1	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0.1	22	1
11	WED	0	0	1	0	0	0	0	2	1	0			2	1	1	1	1	1	1	1	1	1	1	1	0.8	22	5
12	THU	1	0	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.1	24	3
13	FRI		1		1	1	1	1	1	1	1	3	1	0	1	2	1	3	2	1	1	3	3	3	2	1.5	22	8
14	SAT	3	4	5	3	1	2	3	4	3	3	2	4	2	2	1	1	1	1	1	1	3	5	5	2	2.5	24	7
15	SUN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.0	24	2
16	MON																											
17	TUE			1	1	1	1	1	2	3	3	3	2	1			2	2	2	2	2	2	2	2	2	1.8	20	5
18	WED																											
19	THU																											
20	FRI																											
21	SAT																											
22	SUN																											
23	MON																											
24	TUE																											
25	WED																											
26	THU																											
27	FRI																											
28	SAT	3	3	3	4	3	4	6	9	6	3	2	2	2	1	1	1	1	1	1	1	1	1	2	1	2.6	24	11
29	SUN	1	0	1	1	1	1	2	3	2	2	2	2	1	1	2	2	2	2	5	2	3	2	1	1	1.8	24	8
30	MON	1	1	1	2	2	1	2	4	3	2	2	2					2	1	0						1.7	15	4
31	TUE																											
MONTHLY MEAN		1	1	1	1	1	1	1	2	1	1	1	1	1	1			1	1	1	1	1	1	1	1	0.8		
NO. OF DAYS		17	18	18	19	19	19	18	19	19	19	18	18	18	16	14	15	17	18	18	17	17	18	18	18		425	
MAX.HRLY MEAN		3	4	5	4	3	4	6	9	6	3	3	4	2	2	2	2	3	2	5	2	3	5	5	2			

TABLE 3-9 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, AUGUST 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	WED				1	0	1	3	2	1			2	3	3	3	3	2	2	2	3	3	5	6	4	2.5	19	7
2	THU	3	5	4	4	4	4	5	5	3	3	2	2	2	2	2	2	2	3	3	2	2	3	3	3	3.0	24	6
3	FRI	3	3	3	3	3	3	4	10	14	8	6	7	6	3	3	3	4	5	6	4	3	5	4	4	4.8	24	19
4	SAT	4	3	3	3	3	3	2	2	3	2	2	3	4	2	3	6	4	2	2	2	3	2	1	3	2.8	24	7
5	SUN	3	2	1	2	3	2	1	2	2	1	1	4	1	1	1	2	4	1	1	0	2	2	2	1	1.7	24	6
6	MON	1	1	1	1	1	1	1	1	1		0	1	1	1	4	5	7	2	2	4	3	2	1	1	1.9	23	9
7	TUE																											
8	WED																											
9	THU											7	6	5	4	4	4	5	4	4	4	4	4	4	4	4.4	14	7
10	FRI	5	6	6	6	5	5	4	4	4	4	4	4	4	4	5	4	4	4	3	3	4	4	4	4	4.3	24	6
11	SAT	4	4	4	4	4	4	4	3	3	3	3	3	2	2	2	2	2	2	2	3	4	3	3	3	3.1	24	6
12	SUN	3	3	3	3	3	3	3	6	4	3	4	3	3	3	2	2	2	2	2	3	3	3	3	3	3.0	24	6
13	MON	3	2	3	3	4	3	7	4	6								3	2	2	2	3	3	2	2	3.1	17	13
14	TUE	2	2	2	2	2	2	5	4	3	4	3	3	3			1	1	1	1	2	2	2	2	1	2.1	22	6
15	WED	2	2	2	1	2	2	2	2	1				6			5	5	6	5	4	5	5	5	4	3.3	19	7
16	THU	5	5	4	5	4	5	5	5	5	5	5	6	6	5	5	4	5	5	4	5	4	4	4	4	4.7	24	6
17	FRI	4	5	4	4	4	6	5	6	7	5	6	5	5	6	6	5	5	4	4	5	4	4	6	5	5.0	24	8
18	SAT	5	5	5	4	4	4	5	5	4	4	4	4	4	4	4	4	4	4	4	5	5	4	4	4	4.3	24	5
19	SUN	5	4	4	4	4	4	6	5	4	4	5	4	5	4	4	4	4	4	4	4	4	4	4	4	4.2	24	6
20	MON	5	4	5	6	4	4	4	4	4		7	7	6	5	5	4	4	4	4	4	4	4	3	3	4.5	23	8
21	TUE	3	4	3	3	4	5	6	6	7	7	6	5			5	4	4	4	4	4	5	5	7	5	4.8	22	11
22	WED	4	5	4	4	4	5	6	6	5			4	3	3	3	3	3	3	4	4	5	5	8	8	4.4	22	9
23	THU	8	6	6	6	7	7	11	8	5	4	3	4	3	4	4	4	4	4	3	3	3	3	3	3	4.8	24	11
24	FRI	3	4	3	3	3	4	4	5	4	4	4	3	3		5	4	4	4	3	4	4	4	4	3	3.8	23	6
25	SAT	3	3	3	3	4	4	5	4	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3.2	24	5
26	SUN	3	3	3	3	3	3	4	6	5	3	2	2	2	2	2	2	2	2	2	3	3	3	3	2	2.9	24	8
27	MON	2	3	3	3	3	4	5	6	6	6	7	5	4	2	2	3	3	2	2	4	3	3	3	2	3.6	24	10
28	TUE	2	2	2	2	2	2	3	3	3	3	3	3	2	3	3		1	0	0	0	1	0	0	0	1.7	23	5
29	WED	0	0	0	0	1	1	1	1	1	0	0	1	1	2	2	2	1	2	2	3	4	4	4	4	1.5	24	5
30	THU	3	3	3	4	4	4	5	5	4	3	2	2	2	2	2	2	2	2	3	3	4	4	5	6	3.3	24	7
31	FRI	7	7	5	5	5	5	8	10	12	17	16	7	4	4	5	5	4	2	2	2	2	3	2	2	5.9	24	30
MONTHLY MEAN		3	3	3	3	3	4	4	5	4	4	4	4	3	3	3	3	3	3	3	3	3	3	4	3	3.5		
NO. OF DAYS		27	27	27	28	28	28	28	28	28	22	25	27	27	24	26	27	29	29	29	29	29	29	29	29		659	
MAX.HRLY MEAN		8	7	6	6	7	7	11	10	14	17	16	7	6	6	6	6	7	6	6	5	5	5	8	8			

TABLE 3-10 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, SEPTEMBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SAT	4	4	3	4	3	2	2	3	3	2	2	2	3	3	3	3	2	2	3	3	3	4	4	5	3.0	24	6
2	SUN	4	3	3	4	4	2	2	5	3	2	2	1	1	1	1	1	1	1	1	1	1	1	0	1	2.0	24	7
3	MON	1	2	2	2	1	1	2	3	3	4	5	7	4	4	4	3	3	3	2	1	1	1	1	1	2.5	24	13
4	TUE	0	1	1	1	0	3	3	2	3	2					1	1	1	1	1	1	1	1	1	1	1.3	20	4
5	WED	1	2	1	1	1	1	2	3	2				4	4	6	5	4	4	4	4	4	4	3	3	3.0	21	6
6	THU	3	3	3	3	3	4	5	4	4	3	4	3	4	4	3	3	3	3	3	3	4	4	4	6	3.6	24	7
7	FRI	6	7	9	7	6	6	9	9	10	6	5	4	4	3	4	4	3	3	3	4	4	4	5	7	5.4	24	11
8	SAT	6	6	8	7	7	7	9	10	9	8	6	3	3	3	3	3	3	2	3	3	3	4	3	3	5.0	24	11
9	SUN	3	3	3	3	3	4	5	5	3	2	3	4	2	2	2	2	2	3	2	3	3	2	2	2	2.9	24	6
10	MON	2	3	3	2	4	5	4	5	3	3	2	2			2	3	3	5	3	2	3	2	2	2	2.9	22	6
11	TUE	2	2	2	2	2	2	5	4	4	4	4	4		3	3	3	2	2	3	3	3	3	3	4	3.0	23	7
12	WED	4	4	5	4	5	5	5	7	6	4	4	3	4	4	4	4	3	3	3	5	6	5	5	5	4.4	24	8
13	THU	5	6	7	4	5	5	13	8	15	7	7	7	7	4			3	2	2	4	5	3	3	4	5.7	22	33
14	FRI	4	4	4	3	4	3	2	3	3	3	3	13	6	4	3	3	3	3	5	5	4	5	5	5	4.1	24	26
15	SAT	3	3	3	2	3	4	5	5	2	2	2	2	1	2	2	2	2	2	3	11	3	3	3	4	3.1	24	32
16	SUN	5	3	4	3	4	3	5	4	5	7	5	4	4	2	3	5	3	3	3	3	4	2	2	2	3.6	24	11
17	MON	2	2	2	1	1	1	2	2	3	3	3	2			4	3	2	2	2	2	2	2	2	2	2.2	22	5
18	TUE	2	2	2	2	3	6	7	7	4	3	3	3		0	0	1	0	0	0	1	0	0	2	3	2.2	23	9
19	WED	1	1	0	0	0	2	2	2	2		3	3	3	3	3	3	3	3	3	3	3	3	3	3	2.3	23	5
20	THU	3	3	3	3	3	4	5	6	3	3	3	2	3	2	2	2	2	2	3	3	4	4	4	4	3.2	24	9
21	FRI	3	3	3	3	4	5	6	5	3	3	2	3	3	3	3	3	3	4	4	4	4	4	4	3	3.6	24	8
22	SAT	4	4	4	4	5	5	8	9	9	7	4	3	3	3	3	3	3	4	4	6	6	4	4	4	4.6	24	11
23	SUN	4	4	3	4	5	4	4	5	5	4	5	6	6	5	5	6	6	5	5	5	6	6	6	6	4.9	24	7
24	MON	7	7	7	7	6	9	16	17	9		5	6	6	6	6	7	6	6	6	7	6	6	6	5	7.2	23	23
25	TUE	5	7	6	5	8	9	9	11	10	7	6	5		4	5	4	4	4	3	4	4	5	5	4	5.9	23	14
26	WED																											
27	THU																											
28	FRI	5	6	5	4	6	6	8	6	5	5	5	5	5	6	5	5	6	6	6	6	6	8	8	8	6.0	24	10
29	SAT	7	7	7	7	7	8	8	9	8	6	7	5	5	5	5	5	4	5	7	7	7	9	8	8	6.7	24	11
30	SUN	8	7	7	8	9	8	11	17	12	9	6	5	5	4	4	4	4	4	4	7	7	7	9	9	7.2	24	19
MONTHLY MEAN		4	4	4	4	4	4	6	6	5	4	4	4	4	3	3	3	3	3	3	4	4	4	4	4	4.0		
NO. OF DAYS		28	28	28	28	28	28	28	28	28	25	26	26	22	25	27	27	28	28	28	28	28	28	28	28		654	
MAX.HRLY MEAN		8	7	9	8	9	9	16	17	15	9	7	13	7	6	6	7	6	6	7	11	7	9	9	9			

TABLE 3-11 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, OCTOBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON	8	8	7	8	8	7	14	13	11			9	6	5	6	7	6	6	6	5	7	6	6	7	7.5	22	19
2	TUE	6	7	9	9	8	9	12	13	12	10	9	6	5		5	5	4	5	6	7	6	6	5	5	7.3	23	14
3	WED	5	6	6	7	7	8	9	10	9			4	4	7	5	4	5	5	5	5	5	7	5	5	6.0	22	11
4	THU	5	4	5	5	4	4	4	5	5	5	5	5	4	4	5	4	5	5	5	6	5	5	5	5	4.7	24	7
5	FRI	5	5	5	5	5	6	8	7	8	6	7	5	6	5	6	7	5	6	8	7	7	7	6	7	6.2	24	10
6	SAT	7	6	5	5	6	8	9	11	8	8	7	6	6	5	5	5	5	6	6	7	7	7	10	8	6.8	24	15
7	SUN	6	7	7	7	6	7	6	7	7	6	6	6	5	5	5	5	6	7	9	10	11	10	10	9	7.0	24	13
8	MON	8	11	8	10	9	9	10	11	11	10	10	8	9	8	7	9	7	6	6	6	6	6	6	7	8.2	24	17
9	TUE	7	8	8	9	12	13	13	11	12	12	9	6	7		3	3	3	3	3	3	4	3	3	3	6.8	23	18
10	WED	3	3	3	3	4	4	6	6	4	8				3	3	3	3	4	5	5	6	7	5	6	4.5	21	15
11	THU	5	4	4	4	4	4	5	8	6	6	5	4	5	4	4	4	4	4	5	4	4	5	5	5	4.7	24	11
12	FRI	4	3	3	4	3	4	4	5	7	6	4	4	4	4	4	4	4	4	5	4	4	4	5	5	4.3	24	7
13	SAT	6	5	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4	5	8	8	7	7	7	4.8	24	10
14	SUN	7	7	7	7	7	9	9	10	9	10	8	6	4	4	4	4	4	4	4	3	4	3	4	3	5.9	24	13
15	MON	3	3	4	5	6	6	7	7	7			4	4	3	4	4	3	4	4	4	4	3	3	4	4.4	22	11
16	TUE	3	3	4	4	4	6	8	7	7	7	5	6	8		5	5	5	5	5	7	5	4	7	8	5.6	23	9
17	WED	7	7	6	5	4	5	6	9	6			5	6	4	5	5	5	5	7	7	6	5	6	5	5.7	22	11
18	THU	6	5	5	5	6	8	11	12	14	9	5	5	4	4	4	4	4	6	8	8	9	9	11	11	7.2	24	15
19	FRI	10	12	13	12	9	12	19	18	11	11	10	8	7	6	5	5	6	7	9	11	14	14	16	14	10.8	24	23
20	SAT	14	13	13	12	12	13	13	19	21	15	11	10	8	8	7	8	7	7	8	10	9	8	9	9	11.0	24	25
21	SUN	9	9	7	8	7	8	8	7	7	7	9	9	7	7	7	6	5	5	5	5	5	5	5	5	6.7	24	10
22	MON	5	5	7	7	7	15	18	18	15	7	7	5	5	6	6	6	5	7	10	10	10	10	10	6	8.6	24	20
23	TUE	6	9	10	9	6	6	7	14	12	10	7	7	7		8	3	3	3	5	5	5	5	5	5	6.8	23	14
24	WED	5	5	5	5	5	5								7	6	6	6	7	7	10	11	9	8	8	6.7	17	11
25	THU	7	7	7	11	12	14	20	23	20	16	9	7	7	8	8	8	7	7	9	11	11	11	11	11	11.0	24	25
26	FRI	7	6	6	7	11	11	11	11	11	9	9	9	9	8	8	8	8	7	7	7	7	7	7	7	8.2	24	11
27	SAT	6	6	6	6	7	11	11	11	11	11	9	7	7	7	7	7	6	6	7	10	10	10	10	10	8.3	24	11
28	SUN	10	10	10	10	10	10	10	10	9	9	9	9	9	9	9	9	9	9	7	5	5	5	5	5	8.4	24	10
29	MON																											
30	TUE	8	8	8	8	8	8	8	8	8	8	8	8	8	8		9	9	8	8	8	8	8	8	8	8.1	23	15
31	WED	8	8	8	8	8	7	10	12	12	14				10	9	9	9	9	10	12	12	10	10	9	9.7	21	14
MONTHLY MEAN		6	7	7	7	7	8	10	11	10	9	7	6	6	6	6	6	5	6	6	7	7	7	7	7	7.1		
NO. OF DAYS		30	30	30	30	30	30	29	29	29	25	23	27	27	26	29	30	30	30	30	30	30	30	30	30		694	
MAX.HRLY MEAN		14	13	13	12	12	15	20	23	21	16	11	10	9	10	9	9	9	9	10	12	14	14	16	14			

TABLE 3-12 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, NOVEMBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU	8	8	7	7	9	7	12	16	13	12	8	8	8	7	6	6	6	7	9	10	11	12	10	9	9.0	24	18
2	FRI																											
3	SAT																											
4	SUN	3	3	2	3	6	6	8	10	8	13	13	19	17	11	4		1	2	3	2	3	3	5	7	6.7	23	24
5	MON																											
6	TUE	6	7								7	6	4	4	3		1		1	5	10	8	12	15	16	6.9	15	19
7	WED	15	12	9	8	7	9	14	18	15									10	9	10	11	10	10	6	10.7	16	21
8	THU	7	9	7	9	9	8	9	11	15	14	16	20	22	17	11	9	7	7	10	13	22	26	23	22	13.4	24	30
9	FRI	19	14	12	14	15	13	13	15	12	10	10	11	11	9	10	8	8	6	6	4	3	3	5	5	9.8	24	22
10	SAT	3	3	3	3	3	3	5	5	4	3	4	5	4	6	7	5	6	8	10	9	8	10	4	4	5.2	24	13
11	SUN	4	4	4	3	3	4	5	5	5	6	6	4	3	3	3	3	4		5	6	6	6	8	7	4.6	23	9
12	MON	8	7	7	5	5	7	9	13	11	7	8	6	6	8	10	8	8	7	12	10	9	10	11	13	8.6	24	16
13	TUE	17	17	18	18	11	11	17	17	16	13	12	10	10	11		6	5	7	8	10	9	9	6	6	11.3	23	23
14	WED	5	6	6	5	7	10	15	19	15	10			6	6	6	4	4	6	7	9	10	11	10	11	8.6	22	23
15	THU	9	9	9	11	9	12	16	23	27	21	24	13	8	8	7	8	10	10	14	18	19	19	18	20	14.3	24	29
16	FRI	21	20	16	14	20	21	26	32	38	31	19	16	13	11	12	11	12	11	11	13	13	13	12	11	17.3	24	42
17	SAT	9	8	8	8	12	14	12	13	13	13	11	11	10	10	8	8	9	10	10	11	11	15	18	19	11.3	24	19
18	SUN	22	21	19	18	17	19	19	15	12	12	11	7	7	7	7	6	6	5	6	6	6	7	6	6	11.1	24	22
19	MON	7	6	9	7	7	11	16	11	11	11					6	7	8	10	11	8	11	13	11	10	9.4	20	21
20	TUE	9	9	11	9	6	8	9	13	13	10	9	7	9	9	10		12	7	8	4	7	7	6	5	8.5	23	16
21	WED	5	4	4	3	4	6	5	6	7	7	4							8	9	9	5	6	6	6	5.7	18	12
22	THU	5	5	4	4	6	5	6	6	4	4	4	4	3	4	3	3	4	4	4	4	4	4	4	3	4.2	24	8
23	FRI	3	3	3	3	4	5	8	10	10	7	6	7	6	6	6	5	6	8	13	14	14	9	7	7	6.9	24	16
24	SAT	6	5	6	4	5	6	10	15	15	7	5	5	5	4	4	4	5	8	9	10	8	8	8	8	7.0	24	23
25	SUN	7	8	8	10	10	12	15	15	16	12	10	13	9	6	5	6	8	9	8	7	6	7	7	9	9.3	24	19
26	MON	11	9	9	8	7	7	9	9	9	7	6	6	7	7	5	5	5	7	10	8	9	11	10	8	7.7	24	13
27	TUE	8	7	8	6	6	7	9	9	9	9	9	9	9			9	10	11	13	12	9	10	12	11	9.1	22	16
28	WED	10	9	9	11	12	14	15	16	13	12				12	11	10	12	13	13	12	11	13	13	13	12.1	21	17
29	THU	12	12	12	11	13	16	20	20	16	13	14	13	13	12	12	13	12	13	19	29	15	11	14	13	14.4	24	31
30	FRI	14	15	16	15	14	16	18	18	17	17	13	12	10	7	7	7	9	13	12	13	11	14	12	14	13.1	24	21
MONTHLY MEAN		9	9	9	8	9	10	12	14	13	11	10	9	9	8	7	7	7	8	9	10	9	10	10	10	9.5		
NO. OF DAYS		27	27	26	26	26	26	26	26	26	26	23	22	23	23	22	23	24	26	27	27	27	27	27	27		610	
MAX. HRLY MEAN		22	21	19	18	20	21	26	32	38	31	24	20	22	17	12	13	12	13	19	29	22	26	23	22			

TABLE 3-13 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, DECEMBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SAT	16	15	17	16	14	14	16	19	18	15	16	10	7	7	5	5	6	10	12	9	7	7	9	10	11.6	24	21
2	SUN	14	13	13	14	14	11	7	8	8	8	7	8	6	5	4	5	8	10	10	11	12	13	12	13	9.7	24	15
3	MON	10	9	8	8	11	12	13	14	14	12	12	11	9	7	6	8	11	17	19	22	23	25	29	29	14.0	24	30
4	TUE																											
5	WED																											
6	THU																											
7	FRI																											
8	SAT																											
9	SUN																											
10	MON																											
11	TUE																											
12	WED																											
13	THU																											
14	FRI																											
15	SAT	5	4	4	5	8	7	8	7	6	5	4	2	3	6	4	4	5	5	6	5	6	6	4	3	5.1	24	10
16	SUN	3	4	3	3	3	3	4	5	4	4	4	3	3	4	5	6	5	6	5	5	5	5	4	3	4.0	24	8
17	MON	3	3	4	5	5	7	8	6	5	4		6	5	6	7	7	7	7	10	14	15	14	8	7	7.0	23	25
18	TUE	7	9	11	11	11	12	15	20	16	14	11	10	8	7	6	6	7	7	7	9	12	13	12	11	10.5	24	25
19	WED	12	11	12	14	12	13	18	15	8	7							10	11	10	12	12	16	13	14	12.1	18	20
20	THU	13	14	11	11	8	7	9	9	9	8	8	7	4	4	4	3	3	3	3	3	3	3	3	3	6.3	24	18
21	FRI	4	4	4	4	4	5	6	6	6	6	7	6	8	12	13	13	14	15	15	16	15	15	13	12	9.3	24	19
22	SAT	11	11	11	10	11	13	13	16	15	16	14	15	14	11	12	11	12	10	9	9	11	12	10	11	12.0	24	19
23	SUN	10	11	11	14	18	14	10	10	11	9	10	14	12	13	9	12	14	13	12	7	5	5	4	5	10.6	24	24
24	MON	6	5	4	4	5	5	5	5	6	6	5	5	6	5	4	5	5	6	5	7	7	6	6	6	5.3	24	9
25	TUE	7	8	9	7	9	8	6	9	8	10	9	9	9	9	9	10	11	12	13	13	12	11	12	11	9.6	24	14
26	WED	11	11	10	8	10	17	18	11	11	11									5	5	5	4	4	4	9.1	16	23
27	THU	4	4	5	6	9	8	9	9	8	8	10	10	11	11	9	10	9	11	10	9	13	11	13	14	9.2	24	23
28	FRI	16	17	17	19	14	13	15	17	21	16	13	10	10	8	6	5	6	8	10	11	11	15	14	13	12.7	24	31
29	SAT	11	10	10	11	11	11	12	12	12	11	8	12	13	13	8	11	14	10	11	14	14	9	8	6	10.8	24	16
30	SUN	4	4	4	4	4	5	5	6	6	5	6	7	7	6	7	6	6	7	7	7	6	6	6	5	5.6	24	8
31	MON	4	4	4	3	5	8	9	11	10	9	8	7	8	8	8	5	5	6	6	6	6	5	6	6	6.5	24	14
MONTHLY MEAN		8	9	.8	9	9	10	10	11	10	9	9	8	8	8	7	7	8	9	9	10	10	10	9	9	9.0		
NO. OF DAYS		20	20	20	20	20	20	20	20	20	20	17	18	18	18	18	18	19	19	20	20	20	20	20	20		465	
MAX.HRLY MEAN		16	17	17	19	18	17	18	20	21	16	16	15	14	13	13	13	14	17	19	22	23	25	29	29			

TABLE 3-14 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, JANUARY 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	TUE	6	5	6	6	6	6	7	7	8	7	7	7	6	6	6	6	7	7	7	7	6	6	7	7	6.4	24	9
2	WED	6	6	7	10	12	13	14	14	15	14	13							4	6	6	5	4	4	4	8.7	18	17
3	THU	5	4	4	5	5	10	8	9	10	14	13	10	7	7	7	6	6	7	8	8	7	8	7	8	7.5	24	37
4	FRI																											
5	SAT																											
6	SUN	6	5	6	5	8	8	10	13	15	20	22	20			21	13	9	9	10	12	13	14	17	19	12.5	22	25
7	MON	17	16	15	18	19	19	19	24	27	23	20	22	16	11	9	11	11	12	11	10	11	10	12		15.7	23	30
8	TUE																											
9	WED	12	11	9	9	11	11	9	10	9				3	1	1	3	3	3	5	3	3	5	6	3	6.2	21	14
10	THU	3	3	4	4	5	6	8	11	12	9							13	12	11	11	9	8	9	7	8.1	18	18
11	FRI	7	8	7	6	6	9	8	13	15	8	11		7	8	10	10	13	15	13	9	9	11	11	11	9.7	23	20
12	SAT	11	12	10	11	14	14	12	10	13	12	15	19	17	12	7	8	6	7	6	7	11	12	11	9	11.1	24	23
13	SUN	9	10	12	12	12	16	16	12	10	8	8	8	7	8	7	6	5	6	5	6	6	5	5	5	8.4	24	23
14	MON	6	5	6	13	18	16	11	14	18	13	10	8	7	8		7	8	12	12	14	15	11	13	10	11.2	23	23
15	TUE	8	7	15	12	13	20	26	24	22	29	25	15	10	10	7			9	11	9	7	9	10	10	13.9	22	37
16	WED	12	11	12	9	14	19	30	24	25	20	16	17	14	14	11	10	7	11	12	7	8	6	7	7	13.4	24	39
17	THU	6	6	7	8	6	7	14	14	9	9	12	14	15	11	6	5	4	5	8	7	10	10	9	6	8.6	24	26
18	FRI	7	8	12	11	9	11	12	13	13	13	11	10	12	17	19	18	12	8	10	13	14	12	13	12	12.1	24	23
19	SAT	11	14	15	12	15	14	17	17	16	17	15	13	15	11	10	11	10	10	9	8	10	10	13	11	12.6	24	20
20	SUN	10	11	10	8	11	12	6	7	9	8	7	5	4	6	4	4	7	6	6	10	13	13	5	5	7.8	24	17
21	MON	4	4	4	4	5	11	14	12	12	11	10	9	8	7	9		7	8	9	11	9	7	8	8	8.3	23	17
22	TUE	9	7	9	9	12	13	13	14	17	12	9	8	6	6	8			12	13	12	10	7	6	6	9.8	22	19
23	WED	6	6	4	6	7	7	8	8	6				10	7	10	11	10	6	7	7	8	7	6	6	7.3	21	16
24	THU	5	4	4	4	5	7	8	9	10	9	8	8	8	7	7	6	7	6	7	14	11	13	16	15	8.2	24	20
25	FRI	17			9	11	10	13	13	12	10	10	8	8	8	8	8	9	12	12	10	9	10	9	8	10.2	22	26
26	SAT	9	11	12	10	12	11	8	10	14	13	10	7	7	8	6	6	7	6	9	9	9	10	10	8	9.1	24	16
27	SUN	12	13	13	14	11	10	12	12	12	11	9	7	9	7	7	7	7	7	7	9	8	8	8	7	9.5	24	20
28	MON	7	7	6	7	8	10	11	14	12	10	10	9	10	10	10	10	9	9	11	14	12	11	11	11	9.9	24	16
29	TUE	10	12	17	20	20	28	36	34	30	24	20	13	12	12	10		12	10	13	11	13	14	16	10	17.3	23	40
30	WED	7	7	8	9	7	8	8	12	13	20	18			15	16	17	20	20	17	12	11	13	15	11	12.9	22	25
31	THU	8	8	10	9	9	11	17	15	16	15	13	12	12	12	10	9	7	9	13	14	17	22	21	19	12.8	24	24
MONTHLY MEAN		8	8	9	9	10	12	13	14	14	14	13	11	10	9	9	9	9	9	10	10	10	10	10	9	10.4		
NO. OF DAYS		28	27	27	28	28	28	28	28	28	26	25	22	24	25	25	22	25	28	28	28	28	28	28	27		639	
MAX.HRLY MEAN		17	16	17	20	20	28	36	34	30	29	25	22	17	17	21	18	20	20	17	14	17	22	21	19			

TABLE 3-15 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis)

WASHINGTON, FEBRUARY 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI	22	23	17	12	14	15	16	17	19	22	16	12	11	10	10	10	10	10	10	9	7	9	7	8	13.1	24	34
2	SAT	8	11	11	11	12	14	17	16	19	27	32	21	17	13	9	7	9	8	9	12	11	11	11	8	13.5	24	41
3	SUN	7	5	4	4	4	4	4	4	4	4	5	7	7	6	7	5	4	5	7	6	6	9	6	5	5.3	24	13
4	MON	6	7	8	10	10	12	13	15	16	11	8	7	6	6	6	5	6	7	10	8	8	9	10	6	8.6	24	18
5	TUE	12	8	7	11	11	10	18	23	23	35	38	22	18	19			13	19	19	17	16	14	13	17	17.5	22	42
6	WED	16	21	19	18	18	20	26	33	48	44	43	29	29	31	32	22	18	21	21	17	18	19	21	25	25.4	24	56
7	THU	28	23	20	12	14	13	16	21	27	24	35	24	20	16	19	17	15	16	11	11	8	7	5	5	16.9	24	38
8	FRI	4	4	3	3	2	7	7	7	5	8	7	7	7	7	7	6	5	4	5	6	7	8	9	7	5.9	24	11
9	SAT	6	5	5	5	5	7	6	12	12	10	11	5	4	5	4	5				10	10	7	8	8	7.0	21	14
10	SUN	6	4	5	6	13	11	12	19	15	19	20	14	11	7	7	12	12	12	7	13	13	13	10	11	11.3	24	27
11	MON	7	10	9	8	6	6	9	12	7	7		10	14	16	19	14	10	9	11	11	8	7	5	4	9.4	23	24
12	TUE	3	3	3	2	3	10	12	12	14	14	13	12	11	12	10	9		4	5	4	5	5	5	6	7.7	23	17
13	WED	6	4	4	5	6	8	10	11	12			5	8	10	7	8	7	7	8	8	7	10	15	11	8.0	22	19
14	THU	9	10	9	7	6	9	10	11	11	9	8	9	10	12	11	10	9	8	8	8	8	7	6	6	8.7	24	17
15	FRI	6	5	7	6	6	7	10	10	11	10	9	9	8	8	8	7	7	7	7	7	7	6	7	7	7.5	24	12
16	SAT	8	7	7	7	9	11	11	11	9	7	6	5	11	10	8	7	6	7	9	11	13	15	18	20	9.6	24	22
17	SUN	18	22	19	19	21	25	25	18	15	12	9	9	6	7	7	8	11	9	12	14	8	7	6	7	13.1	24	31
18	MON	9	13	10	10	14	17	21	29	30	27	33	22	12	9	3	7	8	9	15	15	15	9	6	7	14.7	24	41
19	TUE	8	6	9	11	13	17	10	16	14	16	12	9	10					7	8	10	9	7	7	9	10.4	20	21
20	WED	9	9	8	10	10	10	12	10	8	9	10	6	6	6	6	5	4	7	6	7	6	5	4	4	7.3	24	16
21	THU	3	4	5	5	3	5	8	8	8	8	8	7	9	9	8	7	7	7	8	7	7	6	6	5	6.5	24	14
22	FRI	6	5	6	5	5	6	7	8	7	7	7	6	7	7	6	6	6	6	7	11	13	10	9	9	7.2	24	15
23	SAT	7	8	9	11	16	16	17	14	13	10	8	8	7	7	7	7	7	10	12	11	13	12	11	11	10.5	24	19
24	SUN	11	9	9	7	8	7	7	9	8	10	8	11	8	8	11	9	7	11	11	18	16	10	7	9	9.6	24	23
25	MON	8	8	8	12	16	22	23	21	19	10	10	9	9	8	9	8	9	12	10	10	14	15	9	8	11.9	24	26
26	TUE	9	11	8	7	7	8	11	10	11	9	9	11	10	9	9		7	7	8	8	8	8	7	7	8.6	23	14
27	WED	7	5	6	7	9	14	17	16	13	11	12	10	10	9	9	9	7	8	8	11	11	12	11	6	9.9	24	20
28	THU	8	7	6	9	7	7	9	11	10	8	9	14	14	11	14	9	9	10	19	27	27	23	18	14	12.5	24	33
MONTHLY MEAN		9	9	9	9	9	11	13	14	14	14	15	11	11	10	10	9	8	9	10	11	11	10	9	9	10.6	658	
NO. OF DAYS		28	28	28	28	28	28	28	28	28	27	26	28	28	27	26	25	25	27	27	28	28	28	28	28			
MAX. HRLY MEAN		28	23	20	19	21	25	26	33	48	44	43	29	29	31	32	22	18	21	21	27	27	23	21	25			

TABLE 3-16 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, MARCH 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI	11	14	13	12	12	13	14	18	15	16	14	13	12	11	10	11	10	11	10	10	13	16	15	12	12.8	24	21
2	SAT	14	13	12	12	10	13	18	27	15	11	11	10	9	9	10	8	8	8	9	11	12	16	13	16	12.3	24	38
3	SUN	13	13	16	13	14	21	21	21	19	10	9	7	7	7	6	6	6	8	11	13	11	12	12	11	11.9	24	28
4	MON	6	6	5	6	7	10	13	9	10	8	9	6	6	7	8	9	10	12	20	18	13	10	10	11	9.4	24	22
5	TUE	14	18	17	17	19	15	10	11	13	16	13	11	16	15	13		10	10	8	7	6	6	5	5	11.9	23	25
6	WED	5	5	5	4	5	6	9	11	10	16	12	10	8	6	7	7	7	7	10	8	8	9	7	6	7.9	24	21
7	THU	5	5	7	7	9	11	9	10	11	10	7	7	6	6	6	6	4	5	7	10	11	12	13	19	8.4	24	22
8	FRI	14	17	10	6	9	6	8	8	8	9	8	7	7	6	5	5	5	5	7	12	13	14	14	15	9.1	24	21
9	SAT	15	18	18	18	19	13	10	12	10	13	14	10	9	7	11	6	7	11	7	6	7	7	7	5	10.8	24	25
10	SUN	6	6	10	11	11	14	21	18	7	5	4	4	4	4	4	4	4	4	6	7	8	8	9	6	7.7	24	34
11	MON	7	8	7	10	14	12	12	10	12				8	11	10	9	8	9	9	9	8	7	8	6	9.2	21	19
12	TUE	6	5	7	7	7	10	16	21	25	28	25	21	17	18			18	19	11	17	13	10	11	10	14.5	22	32
13	WED	6	6	6	6	7	10	13	16	13	17	15				12	14	14	15	15	14	9	10	6	5	10.7	21	22
14	THU	4	5	4	6	5	8	14	14	12	11	11	10	10	9	7	5	4	5	6	8	8	7	8	8	7.9	24	20
15	FRI	7	5	7	7	9	11	17	20	11	7	5	6	7	9	9	9	7	9	9	6	6	8	12	8	8.8	24	29
16	SAT	10	8	6	10	8	11	12	17	14	10	6	4	4	5	6	5	5	5	5	6	5	7	8	7	7.6	24	21
17	SUN	6	4	4	5	5	6	8	10	9	8	6	6	7	7	6	6	7	7	7	4	4	4	4	4	5.9	24	13
18	MON	3	3	3	3	3	6	11	9	9	9	9	8	7	7	7	5	5	5	6	7	8	7	7	7	6.3	24	17
19	TUE	6	5	5	5	6	7	8	9	10	11	9	8	8			7	5	5	5	4	4	4	7	6	6.5	22	14
20	WED	5	4	6	6	5	6	10	14	14	16			8	8	6	6	5	4	4	4	5	6	7	6	7.1	22	20
21	THU	6	5	5	7	7	6	8	11	11	8	8	9	8	9	7		8	7	8	9	8	7	7	6	7.5	23	14
22	FRI	5	5	5	5	5	5	10	10	10	9	9	9	9	9	7	6	4	5	5	6	6	5	6	6	6.7	24	13
23	SAT	5	6	6	6	6	8	9	8	6	5	6	6	5	5	5	5	5	7	8	11	11	12	15	10	7.3	24	17
24	SUN	10	13	14	15	12	13	12	15	18	16	6	7	6	4	5	5	5	6	7	7	5	6	6	4	9.0	24	24
25	MON	4	5	5	5	5	6	7	8	6	6	6	9	7	5	5	5	6	6	7	6	5	6	5	4	5.7	24	11
26	TUE	4	4	4	4	3	6	6	6	6	7	7	4	3	3	4		5	4	6	6	4	7	8	8	5.0	23	10
27	WED	6	5	4	4	4	8	8	11	12	8	6	6	5	5	4	5	4	4	5	8	9	10	10	8	6.7	24	17
28	THU	8	7	6	5	4	5	7	10	13	9	5	6	5	5	3		8	6	6	8	9	10	11	10	7.2	23	15
29	FRI	11	11	12	12	6	6	8	5	4	5	5	4	4	4	4	3	4	4	4	5	6	5	5	4	5.9	24	16
30	SAT	5	5	7	7	6	6	7	10	8	6	5	7	5	4	3	3	3	3	3	4	3	4	4	4	5.1	24	12
31	SUN	4	5	5	5	5	6	7	5	4	3	3	3	3	2	2	2	2	3	3	5	5	4	3	3	3.9	24	8
MONTHLY MEAN		7	8	8	8	8	9	11	12	11	10	9	8	7	7	7	6	6	7	8	8	8	8	8	8	8.3		
NO. OF DAYS		31	31	31	31	31	31	31	31	31	30	29	28	30	29	29	26	31	31	31	31	31	31	31	31		728	
MAX.HRLY MEAN		15	18	18	18	19	21	21	27	25	28	25	21	17	18	13	14	18	19	20	18	13	16	15	19			

TABLE 3-17 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, APRIL 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON	3	3	4			5	6	7	5	4	5	5	5	8	8	6	5	5	7	6	6	5	8	8	5.6	22	9
2	TUE	10	12	8	9	10	9	11	11	11	9	8	9						4	5	7	6	6	6	8	8.2	19	12
3	WED	7	6	4	5	4	4	6	7	7	7		5	4	3	4	4	5	4	4	4	6	6	4	4	4.9	23	11
4	THU	4	5	5	5	3	3	3	5	5	4	4	4	4	4	3		5	3	3	4	4	4	4	4	4.0	23	7
5	FRI	4	4	4	4	3	4	7	10	10	9	8	7	6	6	6	6	3	4	4	7	8	9	8	10	6.2	24	13
6	SAT	9	9	7	9	11	13	20	19	10	5	5	5	5	4	4	5	5	5	6	6	7	6	6	5	7.7	24	26
7	SUN	4	4	6	5	4	4	6	7	8	8	7	7	7	8	8	5	4	5	5	4	4	3	4	4	5.3	24	12
8	MON	4	6	5	4	4	5	11	10	7	9	11	10	10	8	5	5	6	4	5	5	4	5	6	9	6.6	24	23
9	TUE	6	5	5	5	5	6	7	10	9	7	9	10	10		10	6	4	5	4	8	10	4	4	4	6.7	23	14
10	WED	3	3	3	3	3	4	7	8	8	7	6	6	5	6	5			6	5	6	6	5	6	6	5.2	22	11
11	THU	6	5	5	5	4	5	9	10	9	9	8	6	6	6	5	3	3	3	3	5	6	4	5	4	5.6	24	13
12	FRI	3	4	3	4	4	5	6	8	7	4	3	3	5	5	5	3	3	3	3	4	4	4	4	4	4.3	24	10
13	SAT	3	4	4	3	5	6	7	5	5	4	5	5	4	2	2	2	3	2	3	3	5	4	3	3	3.9	24	10
14	SUN	3	3	3	3	4	6	9	6	5	3	2	2	2	2	1	1	2	2	2	4	5	5	6	6	3.6	24	12
15	MON	5	3	4	4	4	5	8	10	9	7	3	2	3	2	2	2	2	2	3	5	8	7	7	6	4.7	24	14
16	TUE	5	5	5	7	10	14	15	11	5	4	3	3	2	2			1	2	2	1	2	3	1	3	4.8	22	21
17	WED	2	2	2	3	3	4	6	5	4	3			3	5	4	6	5	5	3	4	5	5	4	3	4.0	22	9
18	THU	5	5	7	5	4	7	6	12	13	9	11	3	2	2	2				4	6	7	7	7	7	6.3	21	15
19	FRI	6	7	7	9	9	9	9	5	4	4					8	7	7	6	6	5	3	5	5	5	6.3	20	12
20	SAT	3	3	3	4	5	2	3	4	4	4	4	4	3	4	3	4	4	3	3	3	4	4	5	6	3.8	24	8
21	SUN	5	7	6	6	4	4	8	14	8	4	4	3	3	3	3	4	4	4	5	5	5	4	4	5	5.0	24	25
22	MON	5	5	5	4	5	4	7	5	4	4				5	5	4	3	3	4	5	6	5	5	6	4.7	21	9
23	TUE	4	4	5	5	5	4	6	6	5	5	6	7	7	7	6		3	3	4	4	3	3	4	4	4.7	23	7
24	WED	3	3	4	4	4	5	7	7	7	6	7	6	5	5	5	5	5	6	6	7	8	8	9	8	5.8	24	10
25	THU																											
26	FRI																											
27	SAT																											
28	SUN																											
29	MON																											
30	TUE																											
MONTHLY MEAN		5	5	5	5	5	6	8	8	7	6	6	5	5	5	5	4	4	4	4	5	5	5	5	5	5.3		
NO. OF DAYS		24	24	24	23	23	24	24	24	24	24	20	21	21	21	22	18	21	23	24	24	24	24	24	24		549	
MAX.HRLY MEAN		10	12	8	9	11	14	20	19	13	9	11	10	10	8	10	7	7	6	7	8	10	9	9	10			

TABLE 3-18 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, MAY 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	WED																											
2	THU																											
3	FRI	11	10	11	12	13	15	24	38	34	22	11	8	5	5	5	5	4	5	7	7	7	6	5	8	11.6	24	45
4	SAT	6	9	8	10	9	12	16	18	16	11	8	4	3	4	3	4	4	5	6	5	5	5	3	3	7.4	24	25
5	SUN	3	6	3	4	5	5	5	6	6	7	7	9	7	4	4	3	5	4	3	3	3	4	3	3	4.7	24	10
6	MON	3	3	3	3	3	5	4	4	5	7	7	6	8	7	6	5	4	3	3	3	5	3	4	4	4.4	24	10
7	TUE	6	5	5	4	4	5	6	4	3	3	3	2	2			1	1	1	1	2	3	3	2	2	3.0	22	7
8	WED	5	3	7	5	2	2	2	3	3	3	4	4	4				3	4	3	3	3	4	4	5	3.5	21	8
9	THU	3	3	4	2	4	4	4	7	5	6	4	3	3	3	2	2	3	3	2	3	4	5	6	5	3.7	24	10
10	FRI	5	5	4	4	7	9	13	17	16	13	5	5	4	3	2	3	2	3	4	6	3	3	3	4	5.9	24	24
11	SAT	2	2	3	7	10	7	4	3	2	2	2	1	1	1	1	1	1	1	1	3	4	3	2	2	2.8	24	11
12	SUN	2	2	2	2	2	2	2	2	2	2	2	2	2	2			2	3	3	3	5	5	5	7	2.7	22	8
13	MON	4	7	8	6	6	12	9	6	4	4	3	3	3	3	3	4	3	4	4	5	5	4	3	3	4.9	24	13
14	TUE																											
15	WED																											
16	THU	1	1	1	1	1	1	2	1	1	1	1	1	1			1	1	1	1	1	1	1	1	1	1.0	22	2
17	FRI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24	4
18	SAT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.1	24	2
19	SUN	1	2	2	1	1	2	2	2	2	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	1.6	24	2
20	MON	2	2	2	2	2	2	2	2	2	1	1	1			2	1	1	1	1	1	1	1	1	1	1.4	22	3
21	TUE	1	1	1	1	1	1	1	1	1	1	1	1	1					1	1	1	1	1	1	1	1.1	20	3
22	WED	1	0	0	1	1	1	2	4	5	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1.3	24	7
23	THU	1	1	1	1	1	2	3	2	1	1	1	1	1	1			1	1	1	1	2	4	1	1	1.4	22	5
24	FRI	1	1	1	2	3	3	5	5	2	2	2	1	2			2	3	2	2	2	2	2	2	3	2.3	22	6
25	SAT	3	2	2	2	2	3	4	7	2	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1.9	24	11
26	SUN	1	1	1	1	1	1	1	1	1	3	2	2	1	1	1	2	2	2	3	4	2	1	1	1	1.6	24	5
27	MON	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24	3
28	TUE	1	1	1	1	1	1	2	2	2	1	2	2	2		1	1	1	1	1	0	1	1	1	1	1.1	23	4
29	WED	0	0	0	0	0	1	1	0	1	1	1	2			0	0	0	0	1	0	0	0	0	0	0.5	22	4
30	THU	0	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	2	3	2	0.6	24	8
31	FRI	2	2	0	0	0	2	3	1	0					1	1	1	1	1	2	6	3	2	2	3	1.6	20	9
MONTHLY MEAN		3	3	3	3	3	4	4	5	4	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2.8		
NO. OF DAYS		27	27	27	27	27	27	27	27	27	26	26	26	24	19	20	23	26	27	27	27	27	27	27	27		622	
MAX.HRLY MEAN		11	10	11	12	13	15	24	38	34	22	11	9	8	7	6	5	5	5	7	7	7	6	6	8			

TABLE 3-19 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, JUNE 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SAT	3	1	1	1	1	1	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	24	4
2	SUN	0	0	0	0	1	2	1	1	1	1	1	1	1	2	3	3	2	3	2	1	0	0	0	0	1.1	24	3
3	MON	0	0	1	1	1	2	2	2	1	1				1	2	2	2	1	2	3	3	1	1	2	1.5	21	4
4	TUE	1	1	1	1	1	3	5	4	6	4	4	2	1	1	1	0	0	0	0	0	0	0	0	0	1.5	24	12
5	WED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0.1	24	3
6	THU	1	2	0	0	0	2	3	2	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	24	4
7	FRI	0	0	0	0	2	1	2	2	1	2	3	2	1	0	0	0	0	1	0	2	1	0	0	0	0.8	24	5
8	SAT	0	0	1	0	0	0	0	0	0	0	0	0	1	2	2	2	3	1	1	0	0	1	1	0	0.6	24	7
9	SUN	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	2	3	1	0.4	24	4
10	MON	1	1	2	1	2	2	3	4	4	3	2	2	1		2	1	1	1	1	1	1	1	1	1	1.6	23	5
11	TUE	1	1	1	1	1	2	3	3	2	3	2						0	0	0	0	0	0	0	0	1.1	19	5
12	WED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	1
13	THU	0	0	0	0	0	0	1	1	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	2
14	FRI	0	0	0	0	2	2	2	1	4	1					2	2	1	0	1	0	1	2	3	2	1.4	20	7
15	SAT	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	1
16	SUN	0	0	0	0	2	2	2	2	2	1	2	2	0	0	0	0	0	0	1	1	1	1	1	2	0.9	24	4
17	MON	2	3	2	1	2	3	5	4	3	1	0	0	0	1	2	2	2	1	0	1	2	2	2	1	1.7	24	7
18	TUE	2	1	2	2	1	2	3	4	3	2	1	1			0	0	0	0	0	0	0	0	0	0	1.1	22	5
19	WED	0	0	0	0	0	0	0		2	2	1	1	1	1		1	1	1	1	1	1	1	1	1	0.8	22	2
20	THU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24	2
21	FRI	1	1	0	0	0	1	1	1	1	1	4	1	2	2	1	1	1	1	1	1	1	1	1	1	1.1	24	15
22	SAT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0.8	24	2
23	SUN	0	1	0	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0.6	24	2
24	MON	1	1	1	1	1	1	2	1	1	2		1	1	1	1	1	1	1	1	1	1	2	1	1	1.1	23	6
25	TUE	1	1	1	2	1	1	2	3	1	1	1	1	1		0	0	0	0	0	0	1	1	0	0	0.8	23	4
26	WED	0	0	0	0	0	1	4	3	1	1	1	1	3	2	1	1	0	0	0	0	0	0	0	0	0.7	24	6
27	THU	0	0	0	0	0	0	1	3	3	2	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0.6	24	5
28	FRI	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	0	0	0	0	2	0	0	0	0	0.3	24	5
29	SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	1
30	SUN	0	0	0	0	0	0	0	1	2	2	1	1	0	0	0	0	0	0	0	1	1	1	1	1	0.6	24	7
MONTHLY MEAN NO. OF DAYS MAX.HRLY MEAN		1 30 3	1 30 3	1 30 2	1 30 2	1 30 2	1 30 3	2 30 5	2 29 4	1 30 6	1 29 4	1 27 4	1 27 2	1 26 3	1 25 2	1 28 3	1 29 3	1 30 3	0 30 3	0 30 2	1 30 3	1 30 3	1 30 2	1 30 3	1 30 2	0.8	700	

TABLE 3-20 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, JULY 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON	1	1	0	0	1	2	4	3	2			2	2	1	2	2	1	1	1	1	1	1	1	0	1.3	22	6
2	TUE	0	0	0	0	1	1	3	3	5	5	3	3	3		0	0	0	0	0	0	0	0	0	0	1.2	23	9
3	WED	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0.1	23	2
4	THU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.2	24	3
5	FRI	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	4	3	2	0.6	24	5
6	SAT	0	0	0	0	1	1	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0.6	24	13
7	SUN	1	0	1	0	0	1	4	2	2	1	1	1	0	1	0	0	0	0	1	1	1	2	1	0	0.9	24	6
8	MON	0	1	1	0	0	2	1	2	3	2	1	1	1	2	1	1	1	1	1	2	3	3	2	1	1.3	24	4
9	TUE	1	1	1	1	1	2	2	2	2	1	1	1	1	1		2	2	2	2	3	3	4	4	3	1.8	23	5
10	WED	5	6	7	6	7	8	6	4	4	6	7	5	4	4	3	3	3	4	3	3	5	6	6	6	5.0	24	9
11	THU	5	4	3	3	4	7	8	8	7	6	5	4	4	5	4	4	4	4	4	4	5	6	7	6	5.0	24	16
12	FRI	4	4	4	5	6	7	7	11	9	7	5	5	5	5	6	6	5	5	5	5	6	8	7	6	5.9	24	16
13	SAT	5	5	6	5	6	7	7	5	4	5	6	7	5	5	5	5	4	5	4	4	4	4	4	4	4.9	24	11
14	SUN	5	5	6	5	4	4	4	4	4	3	3	3	3	4	3	5	6	5	9	6	5	3	4	3	4.4	24	10
15	MON	4	4	4	3	4	4	5	7	7	6	6	5	6	6	5	6	5	5	5	6	7	10	9	10	5.7	24	12
16	TUE	9	8	7	6	6	7	7	9	9	8	6	4	4		0	0	0	0	0	0	0	0	1	0	4.0	23	12
17	WED	0	0	1	1	1	2	2	3	4	8	3	5	2	1		0	0	0	0	0	0	0	1	1	1.5	23	20
18	THU	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	1	1	0	1	1		1	1	0.7	23	3
19	FRI	1	1	1	0	1	1	2	3	2	2	1	2	1	1	1	1	1	1	1	2	1	1	1	1	1.3	24	5
20	SAT	1	1	1	1	2	2	2	1	2	2	1	2	2	2	1	1	1	1	1	1	1	1	2	2	1.4	24	4
21	SUN	1	1	2	2	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	3	1.6	24	3
22	MON	3	3	2	3	3	4	4	4	3	3	2	3	3	3	4	5	5	4	4	5	4	3	3	4	3.5	24	6
23	TUE	3	3	3	4	5	4	3	3	3	3	2	3	3												3.2	13	7
24	WED																											
25	THU	0	0	0	0	0	0	1	1	1	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0.4	24	8
26	FRI	1	0	0	1	0	1	2	3	4	1	0	0	0	0	0	0	0	1	1	1	2	2	0	0	0.8	24	6
27	SAT	0	0	0	1	2	1	2	1	0	0	0	1	1	0	0	0	0	0	0	2	1	1	1	1	0.6	24	6
28	SUN	1	2	1	3	2	2	4	1	2	2	2	1	1	2	1	3	7	3	1	2	3	3	2	1	2.1	24	13
29	MON	1	0	0	1	1	1	3	4	3	4	3	3	3		1	1	1	1	1	1	0	0	0	0	1.4	23	6
30	TUE	0	0	0	1	1	1	2	4	7	4	2	1	1	1			0	0	0	0	0	0	0	0	1.2	22	12
31	WED	0	0	0	0	0	2	4	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	24	5
MONTHLY MEAN		2	2	2	2	2	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1		
NO. OF DAYS		30	30	30	30	30	30	30	30	30	29	29	30	29	26	26	28	29	29	29	29	29	28	29	29		698	
MAX.HRLY MEAN		9	8	7	6	7	8	8	11	9	8	7	7	6	6	6	6	7	5	9	6	7	10	9	10			

TABLE 3-21 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, AUGUST 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	1	0	0	0	0	4	2	2	0.8	24	13
2	FRI	4	1	0	0	0	0	2	2	0	0	0	0	0	1	0	1	0	0	1	1	1	2	1	2	0.8	24	5
3	SAT	3	2	2	2	2	2	2	5	8	7	3	2	0	1	1	0	0	0	0	0	0	0	1	1	1.9	24	11
4	SUN	1	1	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	1	1	1	0	0.2	23	2
5	MON	0	0	0	0	0	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	24	10
6	TUE	2	1	1	1	2	5	6	2	1	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0.9	23	8
7	WED	0	0	0	0	0	0	0	0	0	0	0	0					0	0	0	0	0	0	0	0	0.0	20	3
8	THU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	0
9	FRI	0	0	0	0	0	0	0	2	1	0	0	0			0	0	0	0	0	1	0	0	0	0	0.2	22	4
10	SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0.2	24	6
11	SUN	1	1	1	1	1	2	3	4	4	2	1	0	0	0	0				0	0	0	0	0	0	1.0	21	6
12	MON	0	0	0	0	0	1	6	4	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	24	8
13	TUE	0	0	0	0	0	0	0	0									0	0	0	0	0	0	0	0	0.0	16	2
14	WED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	1
15	THU	0	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0.4	24	3
16	FRI																											
17	SAT																											
18	SUN																											
19	MON																											
20	TUE																											
21	WED																											
22	THU																											
23	FRI																											
24	SAT																											
25	SUN																											
26	MON																											
27	TUE																											
28	WED																											
29	THU																											
30	FRI																											
31	SAT																											
MONTHLY MEAN NO. OF DAYS MAX.HRLY MEAN		15 4	15 2	15 2	15 2	15 2	15 5	15 6	15 5	14 8	14 7	14 3	14 2	12 0	12 1	11 1	12 1	14 1	14 0	15 1	15 1	15 1	15 4	15 2	15 2	341		

TABLE 3-22 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, SEPTEMBER 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN												0	0	0	0	0	0	0	0	0	0	0	1	0	0.1	13	2
2	MON	0	3	3	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	24	7
3	TUE	0	0	0	0	0	0	1	1	0	0	0	0	0	1											0.3	14	3
4	WED								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	17	0
5	THU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	1
6	FRI	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	3	2	2	0.7	24	8
7	SAT	1	1	1	1	1	1	1	1	2	2	1	1	1	2	1	1	1	1	1	1	1	2	1	2	1.2	24	4
8	SUN	2	2	1	2	1	1	2	2	2	2	2	1	1	2	2	2	2	2	2	2	2	2	2	2	1.8	24	3
9	MON	2	2	2	2	2	3	2								0	0	0	0	0	0	0	0	0	0	0.9	17	3
10	TUE																											
11	WED																											
12	THU																											
13	FRI																											
14	SAT																											
15	SUN																											
16	MON																											
17	TUE																											
18	WED																											
19	THU																											
20	FRI																											
21	SAT																											
22	SUN																											
23	MON																											
24	TUE																											
25	WED																											
26	THU																											
27	FRI																											
28	SAT																											
29	SUN																											
30	MON																											
MONTHLY MEAN																												
NO. OF DAYS		7	7	7	7	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	8	8		181	
MAX.HRLY MEAN		2	3	3	2	2	3	2	2	2	2	2	1	1	2	2	2	2	2	2	2	2	3	2	2			

TABLE 3-23 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, OCTOBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	TUE																											
2	WED	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0	1	1	1	1	1	0	0	0	1	0.6	24	6
3	THU	0	0	0	0	0	0	0		0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	0.3	23	1
4	FRI	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	0.9	23	1
5	SAT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1.2	24	3
6	SUN																											
7	MON																											
8	TUE	1	1	0	0	0	0	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	24	1
9	WED	1	1	1	1	1	1	1	1				0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	21	1
10	THU	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0.3	24	1
11	FRI	1	1	1	0	1	1	1	1	1	0	0	1	0	1	1	1	1	1	1	1	0	0	1	1	0.7	24	3
12	SAT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24	2
13	SUN	1	2	2	2	2	2	3	1	1	1	1	2	1	1	1	1	1	2	1	1	1				1.4	21	10
14	MON																											
15	TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0.0	23	0
16	WED	0	0	0	0	0	0	1	1	1	3	1	1	0	0	0	0	0		1	0		1	1	1	0.6	22	4
17	THU	1	0	1	0							1	0				1	1	0	0	0			2	3	0.8	13	3
18	FRI	3	2	2	2	3	2	2	2	1	1	1	1	1	0	0		4	3	3	3	5	6	6	6	2.6	23	7
19	SAT	6	8	9	7	7	7	7	10				8	5	5	6	5	5	5	6	6	7	8	9	9	6.9	21	13
20	SUN	8	8	6	7	6	7	8	9	13	16	17	14	10	10	4	2	2	3	4	6	8	11	11	9	8.2	24	21
21	MON	6	7	7	9	8	10	17	10	14	5				3	4	4	5	5	7	9	12	10	9	5	7.9	21	31
22	TUE	4	2	1	0	0	1	1	1	1	1		1	2		2	2	3	2	3	3	3	2	2	2	1.8	22	5
23	WED	2	2	2	2	2	3	3	3		3	4	4	4	4	4	4	3	3	2	3	3	2	3	3	2.9	23	4
24	THU	2	2	3	3	3	4	4	5	5	3	3	3	3	4	3	3	3	2	2	2	2	3	2	3	3.0	24	6
25	FRI	3	3	3	3	3	4	4	5	5	4	3	3	3	3	3	2	2	2	2	2	2	2	3	2	3.0	24	5
26	SAT	2	3	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	1	2	2	1	1	1.9	24	11
27	SUN	1	2	1	1	2	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2	2	1	1	2	1.9	24	5
28	MON	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2.6	24	6
29	TUE	3	3	3	3	3	3	3	4	4	4	3	3	3	3	3	3	3	2	2	2	2	1	1	1	2.7	24	6
30	WED																											
31	THU																											
MONTHLY MEAN		2	2	2	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.2		
NO. OF DAYS		25	25	25	25	24	24	24	23	21	22	21	24	23	23	23	23	25	24	25	25	23	23	24	24		568	
MAX.HRLY MEAN		8	8	9	9	8	10	17	10	14	16	17	14	10	10	6	5	5	5	7	9	12	11	11	9			

TABLE 3-24 HOURLY AVERAGES OF SULFUR DIOXIDE. pphm (conductometric analysis) WASHINGTON, NOVEMBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI	1	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2	1	1	1	2	2	1	1	1	1.2	24	3
2	SAT	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	2	2	1	1	1	1	1	1	1	1.5	24	2
3	SUN	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	0									1.1	16	2
4	MON											2	1	1	1	1	1	1	0	0	1	1	1	0	0	0.8	14	3
5	TUE	0	0	0	0	0	1			2	2	2	2	3	3	2	1	1	1	1	1	1	1	1	1	1.3	22	6
6	WED																											
7	THU											1	2	2	2	0		1	1	1	1	1	1	1	1	1.1	13	4
8	FRI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1.0	24	2
9	SAT	0	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	24	2
10	SUN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	24	3
11	MON	1	1	0	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0.8	24	3
12	TUE	1	1	1	1	0	0	0	1	1	1	1	1				1	1	1	1	2	2	2	2	2	1.0	21	2
13	WED	2	2	2	2	1	2	2	3	4				3	3	3	3	3	3	3	3	3	3	2	2	2.5	21	7
14	THU										2	2	3	2	3	2	2	2	2	2	2	2	2	3	3	2.3	15	5
15	FRI	3	3	3	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	3	4	3	3	4	4	2.9	24	5
16	SAT	4	3	3	3	3	3	3	3	3	3	3	3	3	3			2	3	3	2	3	2	2	3	2.9	22	6
17	SUN	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	3	4	3	3	3	3.1	24	6
18	MON	3	3	3	3	3	3				2	3	3	2	4	3	2	2	2	2	2	2	2	2	2	2.5	21	5
19	TUE									3	3	3	3	3	2	3	3	4	3	4	4	4	4	4	4	3.4	16	4
20	WED									4	4	3			2	2	2	2	2	2	2	2	2	2	1	2.3	14	5
21	THU	1	1	1	1	1	1	1	1	2	2	2	2	2	1	1	2	2	2	2	2	2	1	1	2	1.6	24	3
22	FRI	2	3	3	3	2	3	3	4	6	6	5	3	3	2	1	1	1	2	1	1	2	2	2	2	2.6	24	9
23	SAT	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1	1	1	2	2	2	2	2	2	1.5	24	3
24	SUN	2	2	2	1	1	1	1	2	2	2	1	1	1	2	1	2	2	2	2	2	2	2	2	2	1.7	24	4
25	MON	2	2	2	2	3	2	3	3	3	2	2	1	2	2	2	2	2	3	3	4	3	3	3	3	2.4	24	6
26	TUE	2	2	2	3	2	2	2	3	3	3	3	2	2	2	2	3	2	2	2	3	3	3	3	3	2.4	24	10
27	WED																											
28	THU																											
29	FRI	4	4	3	4	4	5	5	5	6	5	2	3	3	3	3	5	5	4	4	5	5	5	4	4	4.1	24	9
30	SAT	3	4	5	4	5	6	7	9	9	9	8	7	7	6	8	8	6	8	8	7	9	9	9	8	7.0	24	10
MONTHLY MEAN		2	2	2	2	2	2	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1		
NO. OF DAYS		22	22	22	22	22	22	20	20	23	24	26	25	25	26	25	25	26	26	26	26	26	26	26	26		579	
MAX.HRLY MEAN		4	4	5	4	5	6	7	9	9	9	8	7	7	6	8	8	6	8	8	7	9	9	9	8			

TABLE 3-25 HOURLY AVERAGES OF SULFUR DIOXIDE, pphm (conductometric analysis) WASHINGTON, DECEMBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	9	10	8	8	11	13	18	20	20	18	8	7	7	7	6	6	7	9	11	10	11	17	18	19	11.5	24	23
2	MON	19	20	15	21	21	16	20	20	20	20	14	14	14	15	14	16	14	22	11	10	13	12	15	17	16.4	24	30
3	TUE	17	20	22	22	28	19	26	34	31	33	39	27	19	18	21	19	18	18	15	14	14	12			22.1	22	50
4	WED																											
5	THU											2	3	3	2	3	3	2	3	2	2	3	2	2	2	2.5	14	13
6	FRI	2	2	3	3	3	4	3	3	3	3	3	3	2	2	2	2	2	1	1	2	2	2	2	2	2.4	24	4
7	SAT	2	2	5	3	3	3	3	4	4	3	2	2	2	2	2	2	2	3	2	3	3	2	2	2	2.7	24	17
8	SUN	2	3	3	2	2	2	2	2	3	2	1	2	1	2	1	1	2	1	2	1	2	1	1	2	1.8	24	11
9	MON	2	2	1	2	2	2	2	4	3	1	2	2	2	2	2	2	1	0	0	0	0	0	0	0	1.4	24	9
10	TUE	0	0	0	0	0	0	0	0			1	2	2	2	2	2	2	2	2	2	2	2	2	1	1.2	22	2
11	WED	2	2	1	2	3	3	3	3	4	2	1		0		0	0	1	1	2	1	1	1	1	1	1.5	22	8
12	THU	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	3	1	1	1	1	2	2	1	1.2	24	8
13	FRI	1	2	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	24	3
14	SAT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.9	24	2
15	SUN	0	0	0	0	0	0	0	0	0	0	2	1				1	1	1	1	1	1	1	1	1	0.5	21	6
16	MON	1	1	1	1	1	1	2	2	2	2	2	1	1	1	0	0	0	1	1	1	1	1	1	1	1.0	24	2
17	TUE	1	1	0	0	0	1	1	1	1	1	1	1	1												0.9	13	2
18	WED																											
19	THU																											
20	FRI																											
21	SAT																											
22	SUN																											
23	MON																											
24	TUE																											
25	WED											6	5	3	3	3	2	2	6	3	4	3	6	9	7	4.4	14	12
26	THU	7	7	5	5	5	4	4	6	6	6	6	6	8	7	5	5	3	4	9	8	7	7	9	10	6.1	24	10
27	FRI	10	10	9	8	8	8	15	19	20	22	21	19	7			5	4	3	3	3	3	4	4	7	9.6	22	24
28	SAT	[illegible]	6	6	5	6	2	1	1	1	0	3	3	2	2	2	2	2	2	3	3	3	3	6	4	3.0	24	18
29	SUN	4	4	6	6	4	5	8	8	8	9	7	3	4	3	2	2	2	7	8	10	9	9	7	6	5.8	24	16
30	MON	6	4	4	4	4	4	4	10	9	9	8	8	7		5	4	4	4	4	4	5	6	6	6	5.6	23	11
31	TUE	10	10	14	16	14	14	14	20	18	15	12	14	12	9	6	4	4	7	14	14	14	14	14	14	12.4	24	27
MONTHLY MEAN		5	5	5	5	6	5	6	8	8	7	6	6	5	4	4	4	4	4	4	4	5	5	5	5	5.2		
NO. OF DAYS		21	21	21	21	21	21	21	21	20	20	23	22	22	18	20	22	22	22	22	22	22	22	21	21		509	
MAX.HRLY MEAN		19	20	22	22	28	19	26	34	31	33	39	27	19	18	21	19	18	22	15	14	14	17	18	19			

TABLE 3-26 HOURLY AVERAGES OF NITRIC OXIDE. pphm (colorimetric analysis) WASHINGTON, JANUARY 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON																											
2	TUE																											
3	WED																											
4	THU		11	7	3	3	4	13	12	7			9	4	1			4	8	2	3	2	4	4	3	5.5	19	26
5	FRI	3	2	1	0	0	0			3	5	2		4	4			8	8	9	9	12	15	13	9	5.6	19	18
6	SAT	9	9	7	3							15	15	16	19			19	24	33	4	32	31	10	2	15.3	16	44
7	SUN																											
8	MON										6	5	5	2	3		2	4	3	4	2	1	0	0		2.8	13	7
9	TUE				2	1	0				3	3	3	3	2		1	4	7	6	6	3	2	1	1	2.9	17	8
10	WED	1	1	0	0	0	0	1	3	4	4	2	2	2	2			3	4	4	3	3	3	3	2	2.2	22	5
11	THU	2	1	1	1	1	1	2	3	4	5	4	3	3	3			3	5	6	4	4	7	4	4	3.3	22	8
12	FRI	4	4	2	2	1	2	3	6	5		5	3	3	2					5	6	7	7	8	6	4.3	19	11
13	SAT	4	2	2	1	1	0	0	0	1	2	1	1	1	1			3	5	7	8	10	7	7	6	3.3	22	12
14	SUN	4	3	2	2	1	1	1	1	1	1	1	1	1	1			2	2	1	3	6	5	7	13	2.6	22	17
15	MON	15	14	10	7	3	2	4										5	9	11	4	1	1	1	0	5.8	15	18
16	TUE	0	0	0	0	1	0	2	4	5	5	3	2	2	2			3	5	7	11	11	18	18	17	5.2	22	22
17	WED	13	8	4	3	2	1	2	4	6			2	1	1				4	4	2	3	2	2	1	3.4	19	15
18	THU	1	1	1	1	1	1	2	4	5	2	2	3	4	3			4	6	7	5	3	3	3	2	2.9	22	8
19	FRI	2	4	4	6	8	4	4	5	4	5	4	3	2	2			3	4	4	4	4	5	5	5	4.1	22	8
20	SAT	4	4	3	3	3	4	4	4	5	5	6	6	4	4			3	5	6	7	8	6	5	3	4.6	22	9
21	SUN	3	2	5	6	5	6	5	4	5	2	2	2	2	4			4	4	6	6	4	4	3	3	3.9	22	8
22	MON	2	2	1	1	1	1	2	5	7		6	5	4	5			5	6	6	6	5	4	3	4	3.8	21	9
23	TUE	4	1	1	1	0	0	1	3	4	3	1	1	1	1			2	4	3	3	3	3	3		2.0	21	6
24	WED	6	3	3	2	2	3	3	6	6	5	4	3	5	2			3	3	3	3	5	4	5	6	3.9	22	7
25	THU	5	6	5	4	5	9	13	17	17	22	21	9	3	1			1	6	21	23	19	26	26	24	12.9	22	27
26	FRI	15	9	5	4	2	2	2	3		8	7	5	5	7			8	9	6	5	3	2	4	4	5.4	21	19
27	SAT	4	4	6	4	2	1	1	1	2	2	1	1	1	1			2	3	2	2	2	1	1	1	2.0	22	6
28	SUN	1	0	0	0	1	1	1	1	1	1	1	1	1	1	0			3	2	2	2	1	1	1	1.1	22	3
29	MON	1	0	0	0	0	1	3	5	6	6	5	5	4	3	2	0	2			1	1	2	2	2	2.4	22	7
30	TUE	1	1	1	1	1	1	3	8	8									1	1	1	0	1	0	0	1.9	16	10
31	WED	0	0	0	0	0	0	1	3	4	3	2	2	2	2		1	3	3	3	4	5	4	2	3	2.0	23	6
MONTHLY MEAN		4	4	3	2	2	2	3	5	5	5	4	4	3	3			4	6	6	5	6	6	5	5	4.2		
NO. OF DAYS		24	25	25	26	25	25	23	22	22	20	23	24	25	25	2	4	23	25	26	27	27	27	27	25		547	
MAX.HRLY MEAN		15	14	10	7	8	9	13	17	17	22	21	15	16	18	2	2	19	24	33	23	32	31	26	24			

TABLE 3-27 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, FEBRUARY 1962

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU	2	2	2	1	1	2	4	6	7	10	7	5	3	3			0	1	1	1	2	1	1	0	2.8	22	12
2	FRI	0	0	1	1	1	2	3	4	5	8	8	6	4	3					7	6	5	5	5	5	3.9	20	9
3	SAT	4	4	2	2	1	1	2	2	1	1	0	1	1			1	5	7	8	5	4	5	5	4	3.0	22	9
4	SUN	3	3	5	4	4	5	5	6	7	7	7	4	2	1				2	3	7	12	16	18	16	6.5	21	20
5	MON	17	12	11	9	7	10	11	15					2	2				10	12	4	1	0	0	0	7.3	17	20
6	TUE	0	0	0	0	0	0	0	2	3	3	2	2	2	2			1	2	1	0	0	0	0	0	0.9	22	4
7	WED																											
8	THU																											
9	FRI																											
10	SAT																											
11	SUN																											
12	MON																											
13	TUE																											
14	WED																											
15	THU																											
16	FRI																											
17	SAT																											
18	SUN																											
19	MON	3	2	1	0	0	0	1	3	4	6	7	5	4				7	8	6	4	5	6	5	3	3.7	21	10
20	TUE	3	2	4	1	0	0	1	2	4	3	1	2	2	1			1	2	3	2	2	2	2	2	1.8	22	4
21	WED	2	2	1	1	1	1	2	5	7	6	7	5	2	2	2		3	5	4	5	4	6	5	4	3.6	23	9
22	THU	4	3	2	3	4	5	6	6	7	7	5	5	7	8			6	6	7	7	6	5	5	5	5.5	22	9
23	FRI	8	9	9	9	6	7	6	8	10	11	12	10	9	7			6	7	6	5	5	3	3	2	7.1	22	12
24	SAT	1	1	1	2	1	1	3	3	5	5	3	1	0	1				0	1	1	1	2	2	2	1.7	21	6
25	SUN	2	1	0	0	0	0	0	1	1	1	0	1	0	0			2	2	2	2	2	1	1	1	0.9	22	2
26	MON	0	0	0	0	0	1	2	4	7	8	17	18		8			5	8	15	18	11	13	13	24	8.2	21	26
27	TUE	16	8	5	4	5	5	5	13	16	18	16	14	13	11				9	10	8	6	4	3	2	9.0	21	20
28	WED	2	2	2	2	2	2	2	4	5	5	9	8	8	5			3	6	4	2	2	1	1	1	3.5	22	10
MONTHLY MEAN		4	3	3	2	2	3	3	5											5	5	4	4	4	4			
NO. OF DAYS		16	16	16	16	16	16	16	16	15	15	15	15	15	14	1	1	11	15	16	16	16	16	16	16	341		
MAX. HRLY MEAN		17	12	11	9	7	10	11	15	16	18	17	18	13	11	2	1	7	10	15	18	12	16	18	24			

TABLE 3-28 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, MARCH 1962

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI	1	1	0	0	0	0	0	2	3	3	2	2	1	1			1	2	3	3	3	2	2	2	1.5	22	4
2	SAT	1	0	0	0	0	0	1	2	2	2	2	1	1	1			1	3	3	4	5	5	5	4	2.0	22	6
3	SUN	3	1	1	1	1	1	1	2	2	2	1	1	1	1			2	2	2	6	6	7	7	7	2.6	22	8
4	MON	8	6	4	2	3	2	1	1	0	0	0	0	1	0			1	1	2	6	9	10	6	6	3.0	22	10
5	TUE	7	5	3	3	3	3	4	5	5	3	3	3	2	3			4	3	2	1	1	2	3	2	3.1	22	7
6	WED	1	1	1	1	0	0	1	2	2	1	1	1	2	1			4	3	2	1	1	1	1	1	1.3	22	5
7	THU	1	1	0	0	0	0	1	2	3	3	3	1	1	1		0	1	2	3	6	7	9	8	5	2.4	23	9
8	FRI	5	5	1	1	2	2	3	5	5	3	2	1	1	0		0	1	2	3	3	4	4	5	2	2.5	23	6
9	SAT	1	1	1	1	4	4	4	7	8	6	2	2	2	2		0	5	8	8	10	10	10	8	7	4.7	23	11
10	SUN	5	3	3	3	4	5	4	5	4	4	4	3	3	3		0	2	1	2	4	6	9	5	5	3.7	23	11
11	MON	8	6	4	3	3	3	2	2	1	1	1	1	0	0		0	1	2	3	1	1	1	1	2	1.9	23	10
12	TUE	1	1	0	1	2	2	3	7	8	4	7	3	3	2		0	3	2	4						2.9	18	11
13	WED			1	1	1	1	3	11	11	6	4	2	1	1			3	2	3	1	1	0	1	0	2.7	20	14
14	THU	0	0	0	0	0	0	1	6	4	3	2	1	1	1			2	3	3	3	2	3	2	2	1.7	22	6
15	FRI	2	1	1	0	0	0	2	5	5	3	2	2	1	1		0	1	2	2	2	3	3	3	1	1.8	23	6
16	SAT	2	1	1	1	1	1	2	5	6	4	1	1	1	1		0	1	3	3	4	3	3	2	2	2.1	23	6
17	SUN	2	1	1	0	0	0	1	1	2	1	1	0	0	1		0	0	1	1	2	2	2	3	4	1.1	23	4
18	MON	2	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	2	3	4	6	7	1.1	23	8
19	TUE	6	5	10	8	11	13	12	16	15			2	1	1		0	1	3	3	4	2	2	2	1	5.6	21	19
20	WED	1	1	1	1	0	1	1	3	5	5	2	1	0	0											1.4	14	6
21	THU																											
22	FRI																											
23	SAT																											
24	SUN	8	2	1	1	0	1	3	4	3	2	2	2	2	2											2.3	14	12
25	MON																											
26	TUE	1	1	1	0	1	1	3	5	3	2	1	1	1	0			2	2	2	3	8	12	4	1	2.5	22	14
27	WED	1	1	0	0	1	2	4	8	6	2	1	1	1	1			2	2	2	3	3	2	3	3	2.2	22	9
28	THU	3	3	3	3	4	4	8	13	11	7	5					1	1	2	3	5	9	4	4	2	4.7	20	15
29	FRI	1	1	0	1	1	1	4	8	6	3	2	2	1	0			2	3	3	3	2	1	1	1	2.1	22	9
30	SAT	1	1	1	1	1	2	4	5	5	3	2	1	1	2		2	3	3	4	2	4	4	2	3	2.4	23	7
31	SUN																											
MONTHLY MEAN		3	2	1	1	2	2	3	5	5	3	2	1	1	1			2	2	3	3	4	4	4	3	2.5		
NO. OF DAYS		25	25	26	26	26	26	26	26	26	25	25	25	25	25		13	24	24	24	23	23	23	23	23		557	
MAX. HRLY MEAN		8	6	10	8	11	13	12	16	15	7	7	3	3	3		2	5	8	8	10	10	12	8	7			

TABLE 3.29 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, APRIL 1962

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	0	0	0	0	0	0	0	1	1	1	2	2	1	1			1	1	3	1	0	1	0	0	0.8	22	4
2	MON	0	0	0	0	0	0	1	4	3	2	1	1	1			1	1	2	2	3	3	4	4	3	1.6	22	6
3	TUE	1	0	0	0	0	0	2	3	2	1	1	0	1	1		1	2	3	2	2	3	6	7	10	2.1	23	12
4	WED	17	14	20	22	12	12	23	17	10	3	1	1	1	1		1	1	1	1	2	1	1	1	1	7.1	23	30
5	THU	0	0	0	1	0	1	4	5	5		1	1	1	0				1	1	1	1	1	1	1	1.3	20	6
6	FRI	1	1	1	2	2	2	4									1	1	2	1	1	1	1	1	1	1.4	16	6
7	SAT	2	1	0	0	0	1	1	1	2	4	2	3	2	2		1	2	5	10	11	10	2	3	2	2.8	23	15
8	SUN	4	2	2	3	3	3	2	3	1	2	4	4	4	2		2	2	3	9	10	8	7	11	13	4.6	23	17
9	MON	9	10	7	6	8	7	7	10	10	9	6	6	5	5		2	2	2	1	1	1	1	2	2	5.2	23	13
10	TUE	1	1	0	0	0	0	4	4	4	3	2	2	7	2			2	2	3	7	7	10	11	5	3.2	22	14
11	WED	4	3	17	11	3	7	6	8	10	4	2	2	2	2			3	4	4	1	1	2	2	2	4.5	22	22
12	THU	2	1	1	1	1	1	2	4	4	2	2	2	3	3		4	4	4	4	3	2	2	2	2	2.5	23	5
13	FRI	1	1	1	1	1	2	3	5	7	9	9	7	5	2		2	2	3	3	2	1	1	1	1	3.0	23	10
14	SAT	1	1	1	0	0	0	1	2	1	1	1	1	1	1		1	1	1	1	2	4	6	7	8	1.8	23	10
15	SUN	6	6	3	2	1	1	1	0	0	0	1	1	1	1			1	1	1	2	2	2	2	2	1.6	22	8
16	MON	2	2	1	1	1	1	2	3	3	2	1		1	1			2	2	2	2	2	1	1	2	1.6	21	4
17	TUE	1	1	1	1	1	1	3	5	4	3			0	1			2	2	2	2	2	2	5	9	2.4	20	10
18	WED	5	5	4	3	0	0	2	2	2	0	0	0	0	0			1	1	1	2	3	2	3	3	1.8	22	7
19	THU	3	6	5	3	3	3	3	10	4	1	0	0	0	0			0	0	0	1	1	0	0	0	2.0	22	14
20	FRI	0	0	0	0	0	0	0	1	2	0	0	0	0	0			4	1	1	7	6	10	5	4	1.9	22	12
21	SAT	5	1	1	0	0	1	2	1	1	0	0	0	0	0			0	0	1	3	18	16	16	12	3.6	22	25
22	SUN	9	5	2	1	2	1	2	2	2	1	1	2	1	1			1	1	1	1	3	7	13	12	3.1	22	16
23	MON	7	4	0	2	1	2	4	4	6	2	1	1	1	1				1	1	1	1	1	1	0	1.9	21	8
24	TUE	0	0	0	0	0	1	4	5	2	1	0	0	0	0			0	0	0	4	14	27	34	21	5.1	22	40
25	WED	12	17	15	21	27	20	13	7	5	4			0	0			1	1	1	11	30	23	12	12	11.5	20	35
26	THU	9	4	3	3	3	6	5	9	9	3	1						0	1	1	1	0	1	1	1	3.2	19	11
27	FRI	0	0	0	0	0	0	1	3	3	2	1	0	0	0			1	1	2	1	1	1	1	2	0.9	22	3
28	SAT	3	1	1	1	1	1	2	2	1	1	1	0	0	0			1	1	1	1	1	0	0	0	0.8	22	4
29	SUN	1	1	0	1	0	0	0	1	1	1	1	1		1	1			1	1	1	1	1	1	1	0.8	21	2
30	MON	1	1	1	0	1	1	2	4	4	3	2	1		1	1			1	1	1	0	1	0	0	1.2	21	5
MONTHLY MEAN		3	3	3	3	2	2	3	4	4	2	2	2	1	1			1	2	2	3	4	5	5	4	2.8		
NO. OF DAYS		30	30	30	30	30	30	30	29	29	28	27	25	26	27	2	10	25	30	30	30	30	30	30	30		649	
MAX.HRLY MEAN		17	17	20	22	27	20	23	17	10	9	9	7	5	5	1	4	4	5	10	11	30	27	34	21			

TABLE 3-30 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, MAY 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	TUE	1	1	1	0	0	1	2	3	3	2	1	1	1	1			2	3	3	1	1	1	2	3	1.6	22	4
2	WED	1	1	1	0	0	1	1	3	5	3	3	4	5	5		2	4	5	5	5	6	5	5	5	3.2	23	7
3	THU																											
4	FRI																											
5	SAT	1	1	1	1	2	3	4	3	1	0	0	0	0	0		0	0	0	1	2	2	4	3	3	1.4	23	7
6	SUN	2	2	3	1	3	4	3	2	1	1	0	0	0	0		0	0	0	0	0	0	0	0	0	1.0	23	4
7	MON	0	0	0	0	0	0	2	2	1	0		0	0		1	2	2	2	1	2	3	8	5	2	1.5	22	10
8	TUE	3	4	9	9	5	2	2	3	2	1	1	1	1	0		1	3	3	3	3	4	3	3	2	3.0	23	13
9	WED	2	2	2	2	1	1	3	3	2	1	0	0	0	0	0	0	0	0	0	1	1	3	6	10	1.6	24	14
10	THU	16	5	1	1	2	6	9	4	1	0	0	0				1	1	1	1	1	1	1	1	1	2.6	21	21
11	FRI	1	1	1	1	1	1	1	1	2	2	2	1	1	1		0	1	1	1	1	0	1	0	0	1.0	23	3
12	SAT	1	2	2	2	2	3	5	3	2	1	0	0	0	0		0	0	0	0	1	1	1	1	1	1.2	23	6
13	SUN	0	0	0	0	0	0	1	1	1	1	1	0	0	0		0	0	0	0	0	1	1	1	1	0.4	23	2
14	MON	1	1	1	1	1	1	4	6	4	1	1					1	1	1	1	1	2	3	2	3	1.9	20	6
15	TUE	6	5	3	3	3	13	14	7	2	1	0	0				0	1	1	1	1	2	1	1	1	3.0	21	18
16	WED	1	1	1	1	1	1	2	2	2	2		1	0	1		0	0	0	0	0	0	0	0	0	0.7	22	3
17	THU	0	0	0	0	0	1	1	2	2	2	1		1	0	1	1	1	1	2	1	2	2	3	2	1.1	23	4
18	FRI	1	1	1	1	2	6	8	4	1	0	0	0	0	0			0	0	0	1	3	5	5	4	1.9	22	8
19	SAT	7	4	1	0	0	1	1	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0.6	23	8
20	SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	1	1	1	0	0	0.1	23	1
21	MON	0	0	0	0	0	0	2	2	1		0	0	0	0				1	1	2	2	2	1	1	0.7	20	2
22	TUE	1	1	1	1	1	0											1	1	1	1	2	1	1	1	0.9	14	2
23	WED	0	1	1	1	2	5	5	4	4	1				0		0	0	0	0	0	0	0	1	0	1.3	20	8
24	THU	0	0	0	1	0	1	3	4	3	0	0	0	0	0		1	1	1	1	3	2	4	3	4	1.4	23	6
25	FRI	2	3	4	3	4	8	8	5	1	0	0	0	0	0		0	0	0	0	0	3	6	4	3	2.3	23	14
26	SAT	2	5	1	0	1	1	1	0	0	0	0	0	0	0		0	0	0	0	0	0	2	1	1	0.7	23	7
27	SUN	1	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	1	2	4	5	0.6	23	7
28	MON	6	5	3	3	1	1	1	3	2	1	1	1				2	2	1	1	1	1	1	1	1	1.9	21	8
29	TUE	1	1	1	1	0	1	2	2	1	1	0	0	0			1	1	1	1	1	1	1	1	1	0.9	22	3
30	WED	1	1	1	0	1	1	1	1	1	1	1	1	0	0		0	0	0	0	0	2	2	1	1	0.8	23	2
31	THU	1	0	0	0	1	1	4	4	1	0	0	0	0	0		3	3	1	1	1	1	2	5	5	1.3	23	6
MONTHLY MEAN		2	2	1	1	1	2	3	3	2	1	1	0	0	0		1	1	1	1	1	2	2	2	2	1.4		
NO. OF DAYS		29	29	29	29	29	29	28	28	28	27	25	25	23	22	3	25	28	29	29	29	29	29	29	29		639	
MAX.HRLY MEAN		16	5	9	9	5	13	14	7	5	3	3	4	5	5	1	3	4	5	5	5	6	8	6	10			

TABLE 3-31 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, JUNE 1962

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI	4	5	3	5	5	3	4	5	1	0	0	0	0	0			0	0	0	0	1	1	2	1	1.8	22	6
2	SAT																											
3	SUN																											
4	MON	1	2	2	1	1	1	2	1	1	0	0	0	0	0		0	1	0	0	0	0	0	0	0	0.5	23	3
5	TUE	0	0	0	0	0	0	1	5	3	3	2	2	2			1	2	1	1	1	2	2	4	1	1.6	22	7
6	WED	2	2	1	0	0	0	0	2	1	0		0	0	0		0	0	0	0	1	3	6	3	5	1.2	22	9
7	THU	9	0	0	0	0	1	2	2	0	0	0	0	0	0		0	0	0	0	0	2	3	1	1	0.9	23	11
8	FRI	0	0	0	0	0	1	3	3	1	0	0	0	0	0		0	1	0	0	1	1	1	1	1	0.6	23	4
9	SAT	1	1	1	1	0	1	3	3	2	1	0	0	0	0		0	0	0	0	0	0	0	0	0	0.6	23	4
10	[illegible]N	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0.0	23	1
11	MON	0	1	0	1	0	0	2	2	1	1	0	1	1	1		1	1	1	1	1	1	1	1	0	0.8	23	2
12	TUE	0	0	0	0	0	0	3	5	4	2	1	1					1	1	1	2	2				1.5	17	5
13	WED																											
14	THU	1	0	0	0	0	1	2	1	1	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0.3	23	3
15	FRI	0	0	0	0	0	0	0	0	0	0				0		0	0	0	0	0	1	1	1	1	0.2	20	1
16	SAT	0	0	0	0	1	0	0	0	0	0	0	0	0	0		0	0	0	0	0	1	3	6	5	0.7	23	9
17	SUN	6	6	3	3	2	2	2	1	1	0		0	0	0		0	0	0	0	0	1	2	4	2	1.6	22	6
18	MON	2	1	1	0	0	1	3	4	1	0	0	0	0			0	0	0	0	0	1	1	1	0	0.7	22	5
19	TUE	0	0	0	0	0	1	2	2	1	0	0	0	0			1	1	2	3	3	2	1	1	1	1.0	22	4
20	WED	1	1	1	0	1	1	4	5	1	1						1	1	2	1	1	1	0	0	1	1.3	19	6
21	THU	1	1	0	0	1	1	2	2	1	0	0	0	0	0		1	1	0	0	1	2	5	5	9	1.4	23	11
22	FRI	12	15	11	7	7	8	7	7	4	1	1	0	0	0		0	0	0	0	0	0	0	0	1	3.5	23	15
23	SAT	0	0	0	0	0	0	1	1	1	1	0	0	0	0				0	0	0	0	0	0	1	0.2	21	1
24	SUN	1	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	1	1	1	4	0.4	23	4
25	MON	3	2	2	1	1	1	2	2	2	0	0	0	0				0	0	0	0	0	0	0	0	0.7	21	4
26	TUE	4	6	7	7	6	6	6	6	2	1	0	0	0			0	0	0	0	0	0	0	1	1	2.3	22	8
27	WED	0	2	1	0	0	0	0	1	1	1		0	0	0		0	0	0	0	0	0	1	1	0	0.4	22	2
28	THU	0	0	1	1	1	1	3	2	1	1	0	0	0	0		0	0	0	0	0	0	0	0	0	0.5	23	4
29	FRI	0	1	4	3	1	1	1	2	2	1	1	0	0	0			1	1	1	1	2	3	3	3	1.4	22	4
30	SAT	4	4	3	2	2	1	1	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	2	0.8	23	5
MONTHLY MEAN		2	2	2	1	1	1	2	2	1	0	0	0	0	0		0	0	0	0	0	1	1	1	2	1.0		
NO. OF DAYS		27	27	27	27	27	27	27	27	27	27	22	25	24	20		22	26	27	27	27	27	26	26	26		595	
MAX.HRLY MEAN		12	15	11	7	7	8	7	7	4	3	2	2	2	1		1	2	2	3	3	3	6	6	9			

TABLE 3-32 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, JULY 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	3	5	5	2	1	1	1	1	0	0	0	0	0	0		0	0	1	1	1	1	2	1	1	1.1	23	5
2	MON	1	1	1	1	1	1	1	1	1	0	0	0	0	0		0	1	0	0	1	0	0	1	0	0.6	23	2
3	TUE	0	0	0	0	0	0	2	3	4	3	3	2	1	1			1	1	0	1	1	0	0	0	1.0	22	6
4	WED	1	1	1	1	1	1	0	1	1	0	0	0	0	0			0	0	0	0	0	2	2	5	0.8	22	6
5	THU	5	6	5	2	2	4	8	6	1	0	0	0	0	0	1	1	1	0	0	0	0	1	1	0	1.8	24	9
6	FRI	0	0	0	0	0	0	0	0	2	2	1	0	0	0		0	0	0	0	0	0	1	1	1	0.3	23	2
7	SAT	2	1	1	0	1	1	1	7	1	1	0	0	0	0			0	0	0	1	1	1	1	1	0.7	22	2
8	SUN	1	1	1	1	1	1	1	1	1	1	0	0	0	0		0	0	0	0	0	0	0	0	0	0.4	23	1
9	MON	1	1	1	1	1	1	1	2	2	1	1	1					1	1	1	1	1	1	1	1	1.1	20	3
10	TUE	1	1	1	1	1	2	3	3	3	2	2	2	2	2				1	1	1	1	1	2	4	1.8	21	4
11	WED	3	2	2	1	1	3	3	3	2	1		0	0	1		0	0	0	0	0	1	2	3	1	1.3	22	4
12	THU	1	1	1	1	2	3	7	7	2	1	1	1	1	1		0	1	1	1	1	1	2	2	2	1.7	23	10
13	FRI	1	1	1	1	0	1	2	2	1	1	0	0	0	0		0	0	1	1	1	1	4	4	8	1.4	23	16
14	SAT	17	20	20	11	5	5	16	12	3	1	1	3	1			0	0	0	0	0	0	1	1	1	5.3	22	21
15	SUN	0	0	0	0	0	0	0	0	1	0	0	1	1	0		0	0	0	0	0	0	1	1	1	0.3	23	2
16	MON	1	1	1	0	0	1	2	5	5				3			1	1	1	1	0	0	1	0	0	1.2	19	6
17	TUE	0	0	0	0	1	1	1	2	1	1	1	1	0			1	0	0	0	0	0	1	0	0	0.5	22	2
18	WED	0	0	0	0	0	0	2	3	2	2	2	1	1	1		3	2	1	4	4	2	4	7	8	2.1	23	8
19	THU	8	4	3	1	2	6	8	8	3	1	1	1	0	0		1	1	1	1	1	4	5	6	6	3.1	23	13
20	FRI	4	3	3	2	2	4	6	5	2	2	1	0	0	0		0	0	0	1	1	1	1	1	1	1.7	23	6
21	SAT	1	1	0	0	1	1	1	0	1	1	0	0	0	0		0	0	0	0	0	1	1	1	1	0.4	23	2
22	SUN	1	1	0	0	0	0	0	0	1	1	1	1	1	0		0	0	0	0	0	0	3	5	4	0.8	23	5
23	MON	2	2	1	1	1	1	3	3	2	2	1	1	1			0	2	2	2	2	2	2	2	2	1.7	22	3
24	TUE	2	2	1	1	1	1	1	2	2	2	2	2	2				0	0	0	0	0	0	2	1	1.1	21	3
25	WED	3	5	2	0	0	2	12	12	8	2				1		1	1	0	0	0	0	0	1	1	2.5	20	13
26	THU	2	3	2	1	1	2	4	5	2	0	0	1	0	0		1	1	1	0	0	0	0	1	1	1.3	23	6
27	FRI	0	0	0	0	0	1	3	3	2	1	1	1	0	0		0	0	0	0	0	0	2	2	4	0.8	23	5
28	SAT	4	6	9	4	4	4	5	4	2	1	0	0	0	0		0	0	0	0	0	0	0	0	1	1.9	23	9
29	SUN	0	0	0	0	0	0	0	0	0	1	1	1	0	0		0	1	1	2	1	1	1	1	1	0.5	23	2
30	MON	1	1	2	1	1	1	1	2	2	1	1	1	1				1	0	0	1	1	1	1	1	1.0	21	2
31	TUE	1	1	0	0	0	1	2	3	3	2	1	0	0	0			0	0	0	0	0	0	0	0	0.7	22	4
MONTHLY MEAN		2	2	2	1	1	2	3	3	2	1	1	1	1	0		0	0	0	1	1	1	1	2	2	1.3		
NO. OF DAYS		31	31	31	31	31	31	31	31	31	30	28	29	29	24	1	23	30	31	31	31	31	31	31	31		690	
MAX. HRLY MEAN		17	20	20	11	5	6	16	12	8	3	3	3	3	2	1	3	2	2	4	4	4	5	7	8			

TABLE 3.33 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, AUGUST 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	WED	0	0	1	1	1	2	4	4	2	1			0	0		0	0	0	0	1	5	12	9	3	2.2	21	14
2	THU																											
3	FRI																											
4	SAT																											
5	SUN	1	1	0	0	0	0	0	0	1	1	1	0	0	0		0	0	0	0	0	0	0	0	0	0.2	23	2
6	MON																											
7	TUE																											
8	WED																											
9	THU																											
10	FRI											0	0	0	1		1	1	0	0	1	1	1	1	2	0.7	13	4
11	SAT	2	1	1	0	1	0	2	3	2	0	0	0	0	0		0	0	1	1	1	1	1	1	2	0.8	23	4
12	SUN	4	3	1	1	1	2	13	5	0	0	0	0	0	0		0	0	0	0	0	1	0	1	1	1.5	23	15
13	MON	1	0	1	0	1	1	4	4	2								0	0	0	0	0	0	0	0	0.8	17	5
14	TUE	0	0	0	0	0	0	3	3			0	0	0			0	0	0	0	0	0	0	0	0	0.3	20	5
15	WED	0	0	0	0	0	0	2	3	1	0	0	0	0	1			0	1	0	0	0	0	0	0	0.4	22	4
16	THU	0	0	0	0	0	1	3	3	3	1	1	1	3	1		0	0	0	0	1	3	3	3	1	1.2	23	4
17	FRI	1	1	0	0	0	2	3	6	2	1	0	0	0	0		0	0	0	0	0	1	2	2	0	1.0	23	6
18	SAT	0	0	0	0	0	0	2	1	1	0	0	0	0	0		0	0	0	1	1	2	3	2	3	0.7	23	4
19	SUN	3	2	1	1	1	2	4	2	1	0	0	0	1	0		0	0	0	1	0	0	0	0	0	0.9	23	4
20	MON	0	0	1	1	0	1	4	3	1		2	1	0	0		0	1	0	0	0	0	0	0	0	0.8	22	5
21	TUE	0	0	0	0	0	1	4	3	2	0	0	0	0				1	0	0	0	0	1	1	0	0.6	21	4
22	WED	0	0	0	0	0	1	1	1	1	0							0	0	0	0	1	0	1	2	0.4	18	3
23	THU	1	2	1	1	1	2	4	4	1	1	0	0	0	0		1	1	1	0	0	1	0	0	0	0.9	23	5
24	FRI	0	0	0	0	0	3	5	3	1	0	0	0	0	2		0	0	0	0	1	1	1	1	1	0.9	23	7
25	SAT	1	1	0	1	5	4	5	3	1	0	0	1	1	1		0	0	0	0	0	1	1	1	1	1.2	23	6
26	SUN	1	1	1	2	4	2	4	4	1	0	0	0	0	0		0	0	0	1	1	1	1	1	1	1.1	23	6
27	MON	1	1	2	2	2	5	10	8	4	2	2	1	1	0			2	1	1	1	1	1	2	1	2.3	22	11
28	TUE	1	1	1	1	1	2	5	5	3	1	1						1	0	0	1	1	1	1	1	1.4	19	6
29	WED	1	1	1	0	1	2	3	3	1	0	0	0	0	0		0	0	0	0	2	3	2	1	1	1.0	23	4
30	THU	1	0	0	0	0	2	4	4	1	0	0	0	0	0		0	0	0	1	3	5	9	18	17	2.9	23	25
31	FRI	22	18	16	16	16	20	27	13	4	1	1	0	0	0		0	0	0	0	0	0	1	1	0	6.7	23	31
MONTHLY MEAN		2	1	1	1	2	2	5	4	2	1	0	0	0	0		0	0	0	0	1	1	2	2	2	1.3		
NO. OF DAYS		23	23	23	23	23	23	23	23	22	20	21	20	21	19		18	24	24	24	24	24	24	24	24		517	
MAX.HRLY MEAN		22	18	16	16	16	20	27	13	4	2	2	1	3	2		1	2	1	1	3	5	12	18	17			

TABLE 3-34 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, SEPTEMBER 1962

DAY OF MONTH	DAY OF WEEK	A M 12	1	2	3	4	5	6	7	8	9	10	11	P M 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO. OF HR	5-MIN MAX
1	SAT	1	1	1	1	1	1	3	2	1	1	0	1	0	0		0	0	0	1	1	1	2	1	2	1.0	23	4
2	SUN	2	2	2	2	1	1	2	2	2	1	1	2	2	2		0	0	1	1	1	1	1	1	1	1.3	23	2
3	MON	1	1	1	1	1	1	1	2	2	2	1	1	1	1		1	1	1	1	1	1	1	1	0	0.9	23	2
4	TUE	0	0	1	1	1	1	4	4	2	1	1	1	0			8	8	5	7	7	8	5	5	3	3.3	22	10
5	WED	3	5	4	2	2	3	9	8	7	3	3	2	1	1		1	3	2	1	2	2	2	1	1	2.9	23	12
6	THU	0	1	1	0	1	1	5	5	2	1	1	0	0	0		1	1	1	1	3	3	8	12	15	2.7	23	18
7	FRI	21	24	23	23	23	14	12	14	8	3	1	0	0	0		1	1	1	1	3	5	7	14	22	9.6	23	30
8	SAT	29	29	24	21	23	19	25	17	10	3	1	0	0	0		1	1	1	1	1	1	1	1	1	9.0	23	31
9	SUN	0	0	1	1	3	5	5	3	1	0	1	1	0	0		0	0	0	0	1	1	0	0	0	1.0	23	6
10	MON	0	1	0	0	1	3	4	5	1	1	0	0	0			2	2	3	1	2	2	1	1	1	1.3	22	6
11	TUE	0	0	0	0	0	1	3	2	0	0	0	0				1	1	0	1	1	1	2	1	2	0.8	21	4
12	WED	1	1	1	1	1	4	10	6	2	0	0	0	0	0		1	0	0	1	10	17	14	13	14	4.3	23	19
13	THU	21	26	25	15	25	33	42	29	9	1	0	1	1	0		1	0	0	1	0	1	1	1	1	10.2	23	45
14	FRI	1	1	2	1	1	3	7	6	3	1	0	3	1	0		1	1	0	1	2	2	3	4	4	2.0	23	9
15	SAT	2	1	1	1	1	1	4	3	1	0	0	0	0	0		0	0	0	1	1	1	3	5	7	1.4	23	8
16	SUN	3	5	4	4	3	1	2	2	1	1	0	0	0	0		1	1	0	0	0	1	1	1	1	1.4	23	7
17	MON	0	0	0	0	0	0	2	3	1	0	0	1	1			2	2	1	1	2	3	4	5	3	1.4	22	6
18	TUE	3	1	1	1	3	7	9	7	2	0	0	0	0			0	0	0	0	1	0	0	2	4	1.8	22	14
19	WED	0	0	0	0	0	3	11	13	6		1	1	0	0		1	2	3	1	0	1	0	1	0	2.1	22	17
20	THU	0	0	0	0	0	2	5	6	3	1	0	0	0	0		2	2	2	2	5	5	6	4	4	2.0	23	7
21	FRI	2	2	1	1	2	5	10	7	3	1	0	0	0	0		1	1	1	1	2	2	3	3	2	2.2	23	10
22	SAT	2	3	2	1	2	13	13	8	13	5	2	1	1	1		1	1	2	2	3	3	2	3	2	3.7	23	21
23	SUN	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	0	0	2	3	3	3	6	10	1.8	23	11
24	MON	9	5	3	1	4	12	17	15	4	0	0	0		0		1	1	1	1	2	2	1	1	0	3.6	22	20
25	TUE	1	1	1	1	2	4	6	7	5	3	2	2					3	3	2	1	1	1	1	1	2.4	20	9
26	WED	1	1	1	2	2	4	8	9	6	5	5	3	2	2		3	4	4	4	3	3	3	3	2	3.3	23	9
27	THU	1	0	0	0	0	0	1	2	2	3	1	1	0	0		4	5	6	3	3	3	2	2	1	1.7	23	7
28	FRI	0	0	0	0	0	1	8	8	3	1	0	0	0	1		3	6	6	5	5	5	8	12	9	3.5	23	14
29	SAT	8	8	10	8	6	7	11	11	7	4	2	1	1	1		1	1	2	5	8	17	31	32	45	9.9	23	47
30	SUN	45	50	45	46	43	34	24	23	13	5	3	1	1	0		0	0	1	5	13	37	35	34	36	21.4	23	51
MONTHLY MEAN		5	6	5	5	5	6	9	8	4	2	1	1	0	0		1	2	2	2	3	4	5	6	6	3.8		
NO. OF DAYS		30	30	30	30	30	30	30	30	30	29	30	30	27	24		29	30	30	30	30	30	30	30	30		679	
MAX.HRLY MEAN		45	50	45	46	43	34	42	29	13	5	5	3	2	2		8	8	6	7	13	37	35	34	45			

TABLE 3-35 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis)

WASHINGTON, OCTOBER 1962

DAY	OF	A M												P M												DAILY	NO.	5-MIN
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	MEAN	OF HR	MAX
1	MON	37	39	34	30	24	26	37	42	19	6		1	0	0		1	1	2	2	1	2	3	3	5	14.3	22	44
2	TUE	6	9	10	8	6	10	17	18	8	3	1	0				1	1	1	9	6	0	1	1	0	5.6	21	23
3	WED	6	8	11	9	6	5	7	6	4	0			0	0		2	2	2	2	3	3	3	2	3	3.8	21	13
4	THU	3	3	2	3	3	4										4	8	7	11	16	6	5	4	3	5.4	15	17
5	FRI	3	1	1	1	0	2	7	9	6	2	1	0	0	0		0	1	2	13	22	22	29	25	27	7.6	23	34
6	SAT	13	7	5	4	6	6	8	7	3	1	0	1	0	0		0	0	1	3	3	3	2	3	3	3.4	23	25
7	SUN	1	0	0	0	0	0	0	1	1	0	0	0	0	0		0	0	1	3	8	9	9	25	18	3.2	23	31
8	MON	19	17	11	6	5	6	9	9	6	3	2	1	0	0		2	1	1	1	1	1	2	3	3	4.7	23	30
9	TUE	2	2	3	2	5	6				2	1	1	1		1	3	4	3	2	4	3	3	2	1	2.4	20	11
10	WED	1	1	1	1	1	2	9	9	4	1	1	0	0	0		1	1	3	10	17	31	30	22	28	7.5	23	35
11	THU	22	13	7	7	9	9	16	18	14	5	2	1	1	0		1	1	2	3	4	10	10	15	15	8.0	23	24
12	FRI	5	4	2	3	3	4	11	12	9	4						1	1	2	4	7	8	9	15	12	6.2	19	19
13	SAT	10	3	1	0	0	0	1	1	1	1	0	0	0	0		1	1	2	2	4	9	12	14	15	3.4	23	20
14	SUN	15	15	13	11	12	13	11	9	7	6	3	1	0	0			0	0	0	0	1	1	0	0	5.4	22	17
15	MON	0	0	0	0	0	1	11	8	4				1	0		1	2	2	2	1	1	1	1	1	1.7	20	15
16	TUE	1	1	1	1	1	2	6	7	5	3	1	1	1	0		1	0	0	0	1	0	0	1	1	1.5	23	9
17	WED	1	1	1	0	0	3	9	10	3	0	0	0	0	0		1	1	2	5	10	5	2	1	1	2.4	23	13
18	THU	0	0	0	0	1	3	10	10	6	3	0	0	0	0			0	2	3	6	8	10	14	17	4.2	22	18
19	FRI	21	20	12	6	5	7	24	30	10	4	2	1	0	0		0	1	1	3	10	21	26	21	14	10.3	23	35
20	SAT	13	12	15	13	14	13	18	13	7	4	1	0	0	0		0	0	0	1	3	2	1	1	1	5.7	23	19
21	SUN	0	0	0	0	0	0	1	2	1	1	2	1	1	1		1	1	1	1	1	1	1	1	1	0.8	23	3
22	MON	1	1	1	1	1	3	6	6	3	1	0	1	0	1		2	2	2	3	4	4	2	1	0	2.0	23	7
23	TUE	1	2	2	2	0	1	4	5	4	3	2	0		0		2	2	1	1	1	1	1	1	0	1.6	22	6
24	WED	0	0	0	0	0	1	5	6	3		1	0	0	0		2	1	2	1	3	2	2	1	1	1.4	22	9
25	THU	0	1	0	0	2	5	14	15	8	6	2	1	1	1		3	3	3	3	6	8	6	3	1	3.8	23	17
26	FRI	0	0	0	0	0	1	2	4	2	0	1	2	2	1		3	3	3	2	2	2	2	2	2	1.6	23	5
27	SAT	1	1	0	1	2	4	6	9	5	3	2	2	2	1		3	2	4	5	6	5	3	4	3	3.2	23	10
28	SUN	3	2	2	2	1	1	2	3	2	2	2	3	2	1		1	1	1	1	1	1	1	1	1	1.6	23	4
29	MON	4	2	1	0	0	0	0	3	4	2	2	1	1	1		1	2	4	7	8	8	7	7	5	3.1	23	10
30	TUE	3	2	3	2	2	2	4	8	9	7	8	11	9	9		4	5	8	9	7	7	4	5	4	5.8	23	12
31	WED	3	2	2	2	2	4	7	12	13	14	12	11	9				7	9	9	9	8	6	5	5	7.1	21	15
MONTHLY MEAN		6	5	5	4	4	5	9	10	6	3	2	1	1	1		1	2	2	4	6	6	6	7	6	4.5		
NO. OF DAYS		31	31	31	31	31	31	29	29	29	28	26	27	27	26	1	28	31	31	31	31	31	31	31	31		684	
MAX.HRLY MEAN		37	39	34	30	24	26	37	42	19	14	12	11	9	9	1	4	8	9	13	22	31	30	25	28			

TABLE 3-36 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, NOVEMBER 1962

DAY		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	**WEEK**	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU	4	3	2	1	0	1	3	7	7	5	3	2	2	2		2	4	6	7	7	8	9	7	6	4.2	23	9
2	FRI	5	4	4	8	11	13	14	19	17	13	5	3	3	1		2	3	6	8	8	9	8	7	7	7.6	23	21
3	SAT	5	4	3	2	1	1	1	3	4	3	2	3	3	3		4	3	3	3	3	3	2	2	2	2.8	23	6
4	SUN	2	3	3	3	3	5	6	7	9	11	10	6	2	2		2	2	3	6	11	9	9	7	4	5.5	23	15
5	MON	6	4	3	2	2	1	1	3	6	5	5	5	6	5		11	11	14	16	13	16	14	15	10	7.6	23	18
6	TUE	7	4	3	3	3	3	6	11	12	8	5	4	4	3			5	9	15	23	33	41	42	53	13.4	22	66
7	WED	65	37	22	22	19	17	19	26	28	19						3	7	8	10	11	10	15	11	9	19.0	19	68
8	THU	7	5	4	3	2	5	9	15	16	13	9	5	5	2		2	3	5	14	13	14	15	15	14	8.4	23	19
9	FRI	13	11	9	9	8	7	8	10	10	10	8	8	7	7		2	2	2	1	1	1	1	1	1	6.0	23	15
10	SAT	1	2	1	1	1	1	1	2	2	2	2	3	3	3		5	7	8	11	8					3.4	19	11
11	SUN																											
12	MON	3	3	2	0	0	0	2	5	6	3	3	2	2	2		1	2	4	9	9	8	9	13	15	4.5	23	19
13	TUE	32	28	25	21	10	4	5	8	9	6	4	3	3	3											11.6	14	35
14	WED																											
15	THU	6	4	3	3	2	3	6	21	29	17	14	6	2	1		2	6	12	23	35	40	34	24	35	14.2	23	43
16	FRI	43	39	23	10	7	6	19	22	33	28	10	6	2	2				7	8	6	14	11	9	8	14.8	21	54
17	SAT	7	4	4	3	2	3	3	4	5	4	4	3	3	2		2	3	5	7	8	8	8	8	8	4.6	23	10
18	SUN	9	9	8	8	7	6	6	6	6	5	5	4	4	5		2	2	2	2	2	2	2	2	2	4.5	23	9
19	MON	2	1	1	1	1	1	3	6	6	4	3						5	5	6	3	5	5	4	3	3.4	19	7
20	TUE	2	3	2	2	1	1	3	6	10	9	7	6	6	5			8	8	7	5	5	5	5	5	5.0	22	11
21	WED	4	4	3	3	3	3	4	8	10	8			4	3		4	5	7	6	5	3	3	3	2	4.6	21	10
22	THU	2	2	2	1	1	1	1	1	1	1	0	0	1	1		0	0	0	1	1	1	1	1	1	0.9	23	2
23	FRI	2	2	2	2	2	2	2	4	4	4			6	5		3	5	9	10	11	8	6	4	3	4.6	21	13
24	SAT	3	2	2	1	1	1	3	7	7	3	2	2	2	2		2	2	4	4	5	5	6	5	6	3.3	23	9
25	SUN	6	7	6	7	7	5	5	7	6	4	3	4	3	2		1	2	5	6	5	4	3	3	4	4.4	23	10
26	MON	4	3	3	2	2	2	2	5	5	3	2	2	2	2		2	4	6	8	6	5	6	6	5	3.8	23	8
27	TUE	4	3	3	3	3	2	3	5	6	5	4	4	3	3			4	7	11	10	8	5	6	5	4.8	22	12
28	WED																											
29	THU																											
30	FRI																											
MONTHLY MEAN		10	8	6	5	4	4	5	9	10	8	5	4	3	3		3	4	6	8	9	9	9	9	9	6.5		
NO. OF DAYS		25	25	25	25	25	25	25	25	25	25	22	21	23	23		19	23	24	24	24	23	23	23	23		545	
MAX.HRLY MEAN		65	39	25	22	19	17	19	26	33	28	14	8	7	7		11	11	14	23	35	40	41	42	53			

TABLE 3-37 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, JANUARY 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	TUE																											
2	WED																											
3	THU																											
4	FRI																											
5	SAT																											
6	SUN																											
7	MON																											
8	TUE																											
9	WED																											
10	THU	7	6	5	4	4	3	4	11	10							2	4	8	8	8	7	4	4	4	5.6	18	12
11	FRI	4	4	2	0	0	0	0	1	1	5	5	4						31	37	21	13	10	8	8	8.2	19	38
12	SAT																											
13	SUN	6	6	6	5	6	7	9	9	7	5	4	4	3	3			3	3	2	2	2	2	1	1	4.4	22	9
14	MON	1	1	0	1	2	3											6	9	7	7	7	6	4	2	3.9	14	12
15	TUE																											
16	WED																											
17	THU	2	2	2	2	1	1	2	4	4	8	8	6	5	6		2	2	8	8	5	4	5	6	4	4.2	23	11
18	FRI	3	2	6	6	3	3	3	5	5	9	7	8	9	8		14	13	11	10	10	14	13		7	7.6	22	17
19	SAT																											
20	SUN																											
21	MON																											
22	TUE	2	1	0	0	0	1	1	3	7	9	7	5	4	2				8	7	5	5	3	2	2	3.4	21	11
23	WED	2	1	0	0	0	0	0	4	10				9	7		13	11	7	6	4	2	1	1	1	4.0	20	16
24	THU	1	0	0	0	0	0	1	3	4	4	4	4	4			3	2	4	4	5	4	3	4	5	2.6	22	6
25	FRI	5	5	2	1	1	0	1	2	4	4	3	3	3	2			4	7	9	9	8	6	6	2	3.8	22	10
26	SAT	2	0	1	2	2	2	2	2	3	5	4	3	2	2		1	2	3	3	4	5	4	4	3	2.7	23	6
27	SUN																											
28	MON																											
29	TUE	1	1	2	2	3	5	11	16	16	12	9	5	4	3				5	4	3	3	4	4	3	5.6	21	18
30	WED	2	2	1	0	0	0	0	1	9	10	9	8	6	8		7	10	12	13	8	6	5	7	6	5.6	23	15
31	THU	3	3	3	2	1	1	3	4	8	6	4	3	2	2		2	3	4	5	6	11	12	12	12	4.9	23	14
MONTHLY MEAN																												
NO. OF DAYS		14	14	14	14	14	14	13	13	13	11	11	11	11	10		8	11	14	14	14	14	14	13	14		293	
MAX.HRLY MEAN		7	6	6	6	6	7	11	16	16	12	9	8	9	8		14	13	31	37	21	14	13	12	12			

TABLE 3-38 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, FEBRUARY 1963

DAY OF MONTH	DAY OF WEEK	AM 12	1	2	3	4	5	6	7	8	9	10	11	PM 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO. OF HR	5-MIN MAX
1	FRI	13	12	8	7	4	4	5	7	9	13	9	7	6	5		1		6	7	6	7	6	5	4	6.7	22	15
2	SAT	5	5	5	5	5	6	6	7	10	12	17	14	13	9		6	7	8	10	9	9	9	7	4	8.1	23	19
3	SUN	3	2	0	0	0	0	0	0	0	0	0	0	0	0			0	1	1	2	2	2	1	0	0.6	22	4
4	MON	0	0	0	1	1	2	3	4	6	8						2	3	6	5	4	3	3	4	2	2.9	19	10
5	TUE	2	1	1	1	1	1	2	6	8	22	25	15	8	6				11	17	17	20	15	11	8	9.4	21	28
6	WED	8	7	8									14	9	8		6	7	19	26	21	25	31	51	58	19.8	15	67
7	THU	46	41	27	14	12	8	12	13	17	18	13	15	13	9		12	16	26	13	14					17.8	19	51
8	FRI																											
9	SAT	18	19	15	17	10	13	10	15	22	22	20	23	19	15											17.0	14	28
10	SUN																											
11	MON	7	10	8	8	9	8	9	11	12	10	9	12	15	10		27	25	30	28	28	19	18	15	10	14.7	23	42
12	TUE	11	11	11	7	9	8	7	12	9	14	7			2				5	8	6	9	9	3	9	8.3	19	22
13	WED																											
14	THU																											
15	FRI																											
16	SAT	2	2	1	1	1	1	2	3	3	2	2	1	1	2		2	2	2	3	5	7	8	11	11	3.2	23	15
17	SUN	8	8	8	6	5	6	5	6	5	5	3	2	1	2		3	3	4	6	7	5	4	4	3	4.7	23	10
18	MON	4	4	5	3	3	6	9	18	30	31	19	13	8	6			4	6	10	10	8	5	4	3	9.4	22	39
19	TUE	4	2	2	2	2	4	4	7	15	17	11	5	5	3			8	6	5	4	4	2	2	2	5.2	22	21
20	WED	2	2	1	1	2	3	7	11	11	8	5	3	2	2		3	3	6	6	6	4	2	2	1	4.1	23	14
21	THU	2	1	1	1	0	0	2	3	3	2	2	2	2	2		2	3	4	3	2	2	2	1	1	1.9	23	5
22	FRI	1	1	1	1	1	0	1	2	2	1	2	1	1	1		2	1	2	2	3	6	5	3	3	1.8	23	7
23	SAT	2	1	2	3	3	5	6	7	5	5	4			1		1	2	2	3	2	3	3	3	3	3.1	21	11
24	SUN	3	2	2	2	2	1	1	1	1	2	2	4	3	4		4	4	6	5	9	9	3	2	1	3.1	23	18
25	MON	1	1	1	1	1	2	4	8	12	6	4	3	3	3		3	5	10	7	4	5	7	3	2	4.1	23	19
26	TUE																											
27	WED																											
28	THU																											
MONTHLY MEAN		7	7	5	4	4	4	5	7	9	10	8	8	6	5			6	8	9	8	8	7	7	7	6.8		
NO. OF DAYS		20	20	20	19	19	19	19	19	19	19	18	17	17	19		14	16	19	19	19	18	18	18	18		423	
MAX. HRLY MEAN		46	41	27	17	12	13	12	18	30	31	25	23	19	15		27	25	30	28	28	25	31	51	58			

TABLE 3-39 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, MARCH 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI																											
2	SAT																											
3	SUN																											
4	MON																											
5	TUE																											
6	WED	1	1	1	1	1	1	3	6	7	12	9	3	2	2		2	3	4	4	3	2	2	1	1	3.0	23	16
7	THU	0	0	1	1	1	2	2	6	8	4	2	1	1	1		1	2	2	2	3	5	5	5	8	2.8	23	10
8	FRI	6	15	4	1	1	1	2	4	4		4	2	1	1		1	2	3	5	10	11	11	14	21	5.7	22	23
9	SAT	19	18	23	25	19	11	5	5	3	2	2	2	1			1	0	2	1	1	1	1	1	1	6.6	22	27
10	SUN	2	3	2	2	2	2	5	4	1	0	0	0	0	0		1	1	1	1	2	3	3	3	3	1.7	23	7
11	MON	2	2	1	0	2	1	3	4	4	2	2	3	3	4		5	7	7	6	4	4	3	2	4	3.2	23	8
12	TUE	3	2	4	3	2	2	6	11	16	21	15	9	7	7			13	17	12	15	17	11	13	9	9.8	22	29
13	WED	7	6	7	6	5	5	8	12	14	16	15		4	4		0	1	1	2	5	6	8	7	2	6.4	22	18
14	THU	1	1	1	1	1	1	2	4	6	3	2	2	2	2		2	2	3	3	3	3	3	3	3	2.3	23	6
15	FRI	2	1	1	1	1	1	2	5	6	5	3	2	1	1		1	1	2	3	3	3	3	4	5	2.5	23	7
16	SAT	5	3	2	1	2	2	2	4	4	4	3	2	1	2		3	3	4	4	4	5	5	5	5	3.2	23	6
17	SUN	5	4	3	2	2	2	1	2	3	3	3	2	1	1		0	1	1	2	1	0	0	0	0	1.7	23	5
18	MON	0	0	0	0	0	0	1	2	2	2	2	1	1	1		2	2	3	2	2	2	2	1	1	1.2	23	4
19	TUE	1	1	0	0	0	1	2	4	7	4	3	3	4	3			4	5	4	3	2	1	1	2	2.5	22	9
20	WED	2	1	1	1	1	1	3	10	8	8	3	1	1	1		1	1	1	1	1	1	1	1	1	2.2	23	13
21	THU	1	0	0	0	0	0	1	3	4	2	1					1	1	2	2	1	1	1	0	0	1.0	20	5
22	FRI	0	0	0	0	0	0	1	3	3	2	3	2	2	2		2	2	3	3	3	3	2	2	2	1.7	23	4
23	SAT	2	2	2	1	1	1	2	3	2	2	1	1	1	1		1	1	2	3	9	12	14	19	16	4.3	23	23
24	SUN	15	25	38	49	33	27	23	19	14	9	3	2	1	0		1	0	1	6	9	5	7	7	4	12.9	23	52
25	MON	2	2	2	1	1	3	7	14	9	5	2	2	1	0		1	2	4	4	4	3	2	2	1	3.2	23	16
26	TUE	1	1	1	1	0	1	2	4	4	4	3	1	0	0			5	7	5	3	2	3	4	4	2.5	22	8
27	WED	1	1	0	0	0	1	4	10	12	4	1	0	0	0		1	2	2	3	8	11	13	13	9	4.1	23	17
28	THU	6	5	3	2	1	2	5	9	11	6	2	1	1	0			3	3	5	22	29	22	31	38	9.4	22	39
29	FRI	26	21	14	6	2	1	1	2	1	0	0	0	0	0		1	1	1	1	1	2	1	1	2	3.7	23	37
30	SAT	2	2	2	2	2	2	5	9	4	3	2	2	1	1		1	1	1	2	2	2	2	1	2	2.2	23	12
31	SUN	2	1	1	1	1	1	1	2	2	1	0	0	0	0			0	1	1	2	1	0	0	0	0.8	22	3
MONTHLY MEAN		4	4	4	4	3	3	4	6	6	5	3	2	1	1		1	2	3	3	5	5	5	5	5	3.8		
NO. OF DAYS		26	26	26	26	26	26	26	26	26	25	26	24	25	24		21	26	26	26	26	26	26	26	26		587	
MAX.HRLY MEAN		26	25	38	49	33	27	23	19	16	21	15	9	7	7		5	13	17	12	22	29	22	31	38			

TABLE 3-40 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, APRIL 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON	0	0	0	0	0	0	2	5	3	1	2	1	2	3		2	1	3	4	2	4	3	7	7	2.1	23	9
2	TUE	8	7	3	3	2	3	5	10	10	6	3	1	1	0											4.5	14	12
3	WED																											
4	THU	2	1	1	0	0	0	0	1	1	1	0	0	0	0			1	1	1	1	1	1	1	0	0.6	22	3
5	FRI	0	0	0	0	0	0	1	2	2	1	1	1	0	0		1	1	2	3	4	8	8	7	6	2.1	23	11
6	SAT	6	5	6	14	15	22	21	16	5	2	0	0	0			0	0	0	0	0	0	0	0	0	5.1	22	30
7	SUN	0	0	0	0	0	0	0	0	0	1	1	1	0	0		0	0	0	0	1	0	0	0	0	0.2	23	1
8	MON	1	1	1	0	0	0	1	3	2	1	1	1	1	1				2	2	2	1	1	2	1	1.1	21	4
9	TUE	1	0	0	0	0	1	2	5	4	3	4	4	3	4			3	3	3	4	5	1	0	0	2.2	22	6
10	WED	0	0	0	0	0	0	1	2	2	1	1	2	2	2				4	3	2	2	2	2	1	1.3	21	4
11	THU	1	0	0	0	0	0	2	3	2	1	1	1	0	0		1	1	1	1	1	1	1	1	1	0.9	23	3
12	FRI	0	0	0	0	0	0	1	1	1	1	0		1	1		1	1	1	1	1	1	1	0	1	0.6	22	2
13	SAT	0	0	0	0	0	0	0	0	1	0	0	1	1	1		1	1	1	1	1	1	1	0	1	0.5	23	2
14	SUN	1	0	0	1	0	0	0	0	1	1	1						1	1	1	1	1	1	1	1	0.7	19	2
15	MON	1	0	0	0	0	0	1	2	2	2	1	1	1					2	2	4	5	5	4	3	1.8	20	6
16	TUE	3	2	2	2	2						0	0	0				1	1	0	1	1	0	1	0	0.9	16	3
17	WED	0	1	0	0	0	1	1	5	7	2	1	2	2	4		3	2	3	3	10	15	11	9	8	3.9	23	18
18	THU	10	12	17	7	5	5	5	14	21	22			0	0				2	2	10	24	45	50	51	15.8	19	56
19	FRI	42	51	52	42	35	23	13	9	4	2	1	1	0	0		1	1	2	2	2	1	1	1	1	12.6	23	58
20	SAT	1	0	0	0	0	0	0	1	0	0	1	1	0	0		1	1	0	1	1	2	2	3	7	0.9	23	8
21	SUN	4	8	10	7	1	1	2	2	1	1	0	1	0	1		0	0	0	1	2	3	1	1	1	2.1	23	15
22	MON	1	1	0	0	0	0	1	2	2	1				1		1	2	2	1	1	1	1	1	1	1.1	20	4
23	TUE	1	1	1	1	1	1	1	2	2	1	2	3	2	1			1	1	1	1	1	1	1	1	1.2	22	4
24	WED	0	0	0	0	0	1	1	3	3	2	2	1	1	1		1	2	2	2	2	2	2	2	2	1.4	23	3
25	THU	2	1	0	0	0	0	1	3	3	3	1	1	1	1		1	1	1	1	2	5	11	11	11	2.6	23	14
26	FRI	10	6	4	3	2	0	0	0	0	0				2		0	0	0	1	1	1	1	3	3	1.9	20	12
27	SAT	2	1	1	3	5	4	5	4	1	0	0	0	0	0		1	1	1	1	1	3	3	2	3	1.8	23	6
28	SUN	4	5	2	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	1	1	1	1	0.6	23	6
29	MON	0	1	1	1	1	3	6	4	2	2	1	1	1	2			2	1	1	0	0	0	0	0	1.4	22	7
30	TUE	0	0	0	0	0	0	1	3	4	3	2	1	0												1.1	13	7
MONTHLY MEAN		3	4	3	3	2	3	3	3	3	2	1	1	1	1		1	1	1	1	2	3	4	4	4	2.5		
NO. OF DAYS		29	29	29	29	29	28	28	28	28	28	26	24	26	24		17	23	27	27	27	27	27	27	27		614	
MAX.HRLY MEAN		42	51	52	42	35	28	21	16	21	22	4	4	3	4		3	3	4	4	10	24	45	50	51			

TABLE 3-41 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, MAY 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	WED																											
2	THU	0	0	0	0	0	1	3	3	3	1	1	1	1	1		1	1	1	1	5	13	22	23	14	4.1	23	27
3	FRI	11	10	8	5	7	10	8	7	5	5	1	0	0				1	2	2	2	2	1	2	2	4.3	21	12
4	SAT	3	2	3	3	3	6	6	7	5	3	1	0	0	0		0	0	0	0	1	0	0	0	0	1.8	23	8
5	SUN	0	0	0	0	0	0	1	0	1	1	1	0	0	0											0.3	14	1
6	MON																											
7	TUE																											
8	WED	1	1	2	2	1	2	3	3	2	1	1	1	1				1	1	1	1	2	3	6	9	2.1	21	12
9	THU	4	2	1	1	1	5	9	12	5	2	0	0	0	0		1	1	1	1	2	3	7	18	18	4.1	23	29
10	FRI	2	1	1	1	2	4	9	8	4	4	1	1	0	0		1	1	1	1	1	1	2	2	1	2.1	23	12
11	SAT	0	0	0	1	3	3	2	1	2	1	1	1	0	0		0	0	0	0	0	1	1	1	0	0.8	23	4
12	SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	1	0	1	2	3	3	0.4	23	4
13	MON	1	0	1	0	0	3	8	5	1	1	0	0	0	0		1	1	1	0	0	0	0	0	0	1.0	23	9
14	TUE	0	0	0	0	0	2	4	4	3	2	3	4					1	1	2	2	3	2	0	0	1.7	20	6
15	WED	0	0	0	0	0	2	3	3	2	1	0	0	0	0		1	0	0	1	1	1	3	4	2	1.0	23	6
16	THU	3	3	1	0	0	0	6	9	2	1	1	0				0	0	0	0	0	0	2	2	1	1.4	21	11
17	FRI																											
18	SAT																											
19	SUN	5	3	2	1	1	1	2	2	1	1	0	0	0	0		0	0	0	0	1	1	4	12	4	1.8	23	16
20	MON	0	0	0	0	0	1	3	2	0	0	0	0	0			1	1	1	1	2	2	2	3	3	0.9	22	5
21	TUE	5	9	11	13	10	8	9	8	5	4	2	1	0				1	1	1	0	1	2	2	1	4.4	21	17
22	WED	0	0	0	0	0	4	11	9	3	0	0	0	0	0		1	1	1	1	2	1	0	0	1	1.5	23	14
23	THU	0	0	0	0	0	2	4	2	1	1	1	0	0	0		1	1	1	1	2	3	10	3	1	1.5	23	13
24	FRI	0	0	0	2	3	4	5	4	2	1	0	0	0	0				1	1	1	1	1	2	4	1.5	21	6
25	SAT	4	2	5	6	6	12	8	5	2	2	0	0	0	0		1	0	0	0	0	0	0	0	0	2.3	23	14
26	SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	1	0	0	0	0.1	23	1
27	MON	0	0	0	0	0	1	1	1	0	0	1	1	0	0		1	0	0	0	0	0	0	0	0	0.2	23	1
28	TUE	0	0	0	0	0	0	1	2	2	1	1	0	0				1	1	0	0	1	1	1	3	0.7	21	3
29	WED	2	1	0	0	1	2	5	6	5	3	2	2	1	3		3	2	2	2	2	3	4	3	1	2.4	23	7
30	THU	1	1	1	1	1	1	1	1	1	0	0	0	0	0		0	0	0	0	1	6	16	9	4	1.9	23	18
31	FRI	3	1	0	0	0	2	5	2	0	0							0	0	0	0	1	4	12	16	2.5	18	19
MONTHLY MEAN		2	1	1	1	2	3	4	4	2	1	1	1	0	0		1	1	1	1	1	2	3	4	3	1.8		
NO. OF DAYS		26	26	26	26	26	26	26	26	26	26	25	25	23	18		18	24	25	25	25	25	25	25	25		569	
MAX.HRLY MEAN		11	10	11	13	10	12	11	12	5	5	3	4	1	3		3	2	2	2	5	13	22	23	18			

TABLE 3-42 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, JUNE 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SAT	17	13	9	10	7	7	4	3	1	0	0	0	0	0		1	1	1	1	1	1	1	2	2	3.6	23	18
2	SUN	3	2	2	2	1	2	2	2	2	3	3	2	3	3		2	2	2	2	2	1	1	0	1	1.9	23	5
3	MON	0	1	1	1	2	2	3	3	2	2	1	1	1	2		3	2	2	3	5					2.0	19	6
4	TUE										2	2	2	1	1			1	1	1	1	2	2	2	2	1.4	13	4
5	WED	1	1	1	1	1	3	3	3	3	1	1	1	1	1		1	0	0	1	2	2	5	8	9	2.2	23	12
6	THU	8	9	9	6	5	7	9	8	2	0	0	0		0		0	0	0	1	2	3	4	5	6	3.7	22	10
7	FRI																											
8	SAT																											
9	SUN																											
10	MON	8	5	2	1	1	4	7	5	2	1	1	1	1			1	1	0	1	1	1	0	0	1	2.1	22	11
11	TUE	0	1	0	0	0	2	7	8	4	3	3	2	2				0	0	1	1	2	3	1	1	2.1	21	10
12	WED	0	0	0	0	0	1	2	2	2	2	1	1	1	1		1	1	0	0	1	1	1	1	1	0.8	23	3
13	THU	0	0	0	0	0	1	3	3	2	2	2	1	1	0		1	1	1	1	1	5	15	12	8	2.6	23	17
14	FRI	7	5	3	5	6	8	12	8	6	2				0		1	1	1	1	1	3	5	7	6	4.3	20	14
15	SAT	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	2					1.0	19	3
16	SUN											2	1	1	2		1	1	1	1	1	4	11	9	29	5.0	13	33
17	MON	27	22							3	1	1	1	1	0		1	1	1	1	1	1	3	3	4	4.1	17	29
18	TUE	4	1	2	2	1	4	6	8	4	1	1	0				0	0	0	0	0	0	0	0	0	1.7	21	10
19	WED	0	0	0	0	0	1	2	3	1	0	2	0	0	0			1	0	1	1	1	1	1	1	0.7	22	6
20	THU	1	1	1	1	1	2	3	3	2	1	1	0	1	1											1.3	14	5
21	FRI																											
22	SAT																											
23	SUN	2	1	2	1	2	2	1	0	1					0		0	0	0	0	1	2	5	7	16	2.2	19	20
24	MON	11			6	4	4	9	6	2	1	1	0	0	0		0	0	0	0	0	0	1	1	1	2.2	21	13
25	TUE	3	6	5	7	5	9	11	4				0	0	0		0	0	0	0	1	2	4	8	8	3.7	20	16
26	WED	8	8	5	4	6	8	10	8	2	1	0	0	0	0		0	0	0	0	0	1	1	2	2	2.9	23	11
27	THU	1	1	1	1	2	4	6	6	2	1	0	0	0	0		0	0	0	1	1	0	0	0	1	1.3	23	8
28	FRI	0	0	0	0	0	0	0	1	1		2	1	2	1		2	1	1	1		1	1	3		1.0	20	6
29	SAT		1					5	3		1	1	1	0	0		0	0	0	0	1	1	1	1	1	1.0	17	8
30	SUN	1	1	1	2	2	2	2	1	1	1	0	0	0	0			0	1	1	2	2	3			1.1	20	4
MONTHLY MEAN		5	4	2	2	2	3	5	4	2	1	1	1	1	1		1	1	1	1	1	2	3	4	5	2.2		
NO. OF DAYS		22	22	20	21	21	21	22	22	21	21	22	23	21	22		20	24	24	24	23	22	22	21	20		501	
MAX. HRLY MEAN		27	22	9	10	7	9	12	8	6	3	3	2	3	3		3	2	2	3	5	5	15	12	29			

TABLE 3-43 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis)

WASHINGTON, JULY 1963

DAY	OF	A M												P M												DAILY	NO.	5-MIN
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	MEAN	OF HR	MAX
1	MON									0	0	0	1	0	0		0	0	1	0	0	0	1	1	0	0.3	15	2
2	TUE	0	0		1	1	6	6	2	1	1	1	0	0	0											1.4	14	7
3	WED																											
4	THU	1	0	0	0	1	1	1	0	0	0	0	0	0	0		1	1	1	1	1	3	6	7	5	1.3	23	11
5	FRI	2	2	1	1	1	2	4	3	1	1	1	1	1	1			1	2	2						1.5	17	5
6	SAT																											
7	SUN																											
8	MON																											
9	TUE										0	0	0	0		0	1	0	0	0	0	1	2	2	1	0.5	14	2
10	WED	4	7	4	1	1	3	5	3	1	1	0	0	0	0		1	1	0	1	2	3	4	4	3	2.2	23	9
11	THU	2	1	0	0	3	5	7	4	2	1	1	1	1	1		0	0	0	2	3	7	10	4	1	2.4	23	13
12	FRI	2	1	2	9	10	14	17	14	3	1	1	0	1	0		1	1	1	1	1	1	1	2	4	3.8	23	19
13	SAT	6	6	7	7	6	6	5	4	2	2	2	2	2	1											4.0	14	9
14	SUN																											
15	MON																											
16	TUE																											
17	WED	2	2	4	4	7	11	7	4	1	1	0	1	0	0		0	0	0	0	1	1	1	1	1	2.2	23	13
18	THU	1	1	1	1	1	2	4	3	1	1	0	0	0	0		0	0	0	0	0	1	2	3	1	1.1	23	5
19	FRI	0	0	0	0	0	1	3	3	1	1	0	0	0	0			0	0	0	2	1	2	2	3	0.9	22	4
20	SAT	1	1	0	0	0	1	2	2	1	0	0	0	0	0		0	0	0	0	1	1	0	1	0	0.5	23	4
21	SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	1	1	1	1	0.1	23	1
22	MON	0	0	0	0	0	2											0	0	0	0	0	0	0	0	0.2	14	3
23	TUE	0	0	1	2	2	2	2	1	0	0	0	0	0		0		0	0	0	0	0	0	1	0	0.5	22	2
24	WED	0	0	0	1	2	4	14	6	2	0	0	0	0	0		0	0	0	0	0	0	0	0	0	1.2	23	19
25	THU	0	0	0	0	0	3	6	3	2	0	0	0	0	0		0	0	0							0.9	17	9
26	FRI																											
27	SAT																											
28	SUN																											
29	MON																											
30	TUE																											
31	WED	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	24	2
MONTHLY MEAN		1	1	1	2	2	4	5	3	1	1	0	0	0	0			0	0	1						1.3		
NO. OF DAYS		17	17	17	17	17	17	16	16	17	18	18	18	18	16	3	13	17	17	16	15	15	15	15	15		380	
MAX.HRLY MEAN		6	7	7	9	10	14	17	14	3	2	2	2	2	1	0	1	1	2	2	3	7	10	7	5			

TABLE 3-44 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, AUGUST 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU	0	0	0	0	0	0	3	2	4	2	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.6	24	7
2	FRI	2	1	0	0	0	1	4	3	1	1	0	0	1	0		0	0	0	0	1	2	6			1.1	21	9
3	SAT			1	1	1	5	5	8	4	1	1	0	0	0		0	0	0	0	0	1	1	2	9	1.8	21	11
4	SUN	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.2	24	5
5	MON	0	0	0	0	0	1	3	2	1	0	0	0	0	0			0	0	0	1	1	1	2	1	0.6	22	4
6	TUE	1	0	0	0	0	2	5	2	1	0	0	0	0	0	0		0	0	0	0	1	3	0	0	0.7	23	6
7	WED	0	0	0	0	0	0	2	3	2	1	1	1	0	1		0	0	0	0	0	0	0	0	0	0.4	23	4
8	THU	0	0	0	0	0	1	4	3	1	0	0	0	0	0		0	0	0	0	0	0	0			0.4	21	5
9	FRI									1	0	0	0	0	0		0	0	0	0	1	0	2			0.3	13	6
10	SAT		0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	2	3	0.2	22	3
11	SUN	3	4	3	2	2	2	2	2	1	0	0	0							0	0	0	0	1	1	1.3	18	4
12	MON																											
13	TUE																											
14	WED																											
15	THU																											
16	FRI																											
17	SAT																											
18	SUN																											
19	MON																											
20	TUE																											
21	WED																											
22	THU	3	1	1	1	1	3	7	8	5	4	1	1	0	0		0	0	0	1	4	7	6	4	5	2.7	23	11
23	FRI	3	2	0	0	0	0	3	3	1	0	0	0	0	0		0	0	0	0	1	2	6	7	1	1.2	23	8
24	SAT	1	0	0	0	0	1	2	2	1	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0.3	23	3
25	SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	1	1	2	6	0.4	23	8
26	MON	7	5	2	2	1	5	3	2	1	1	1	0	0	0		0	0	0	0	1	1	3	6	7	2.2	23	8
27	TUE	7	11	9	8	8	11	13	7	5	2	0	0	0	0			0	0	0	0	0	0	1	0	3.7	22	15
28	WED	0	0	0	0	0	1	2	2	0	0	0	0	0	0		0	0	0	0	0	0	0	1	1	0.3	23	3
29	THU	1	0	0	0	0	1	3	3	2	0	3	3	3	0		1	1	0	1	1	2	2	3	3	1.3	23	5
30	FRI	2	1	1	1	1	1	4	3	1	1	0	0	0	0		0	0	0	1	4	15	8	7	3	2.3	23	24
31	SAT	1	2	2	6	2	6	8	3	1	1	0	0	0	0		0	0	0	0	1	1	1	0	1	1.5	23	9
MONTHLY MEAN		2	1	1	1	1	2	4	3	2	1	0	0	0	0		0	0	0	0	1	2	2	2	2	1.1		
NO. OF DAYS		18	19	20	20	20	20	20	20	21	21	21	21	20	20	3	17	20	20	21	21	21	21	18	18		461	
MAX.HRLY MEAN		7	11	9	8	8	11	13	8	5	4	3	3	3	1	0	1	1	0	1	4	15	8	7	9			

TABLE 3-45 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, SEPTEMBER 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	1	1	1	0	0	0	1	0	0	0	0	0	0	0		0	0	0	0	0	4	14	15	8	2.1	23	17
2	MON	8	12	10	14	13	13	13	6	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	3.9	23	17
3	TUE	0	0	0	0	0	0	2	1	0	0	1	1	0	0		0	0	0	0	0	0	0	0	0	0.2	23	2
4	WED	0	0	0	0	0	1	3	4	1	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0.3	23	5
5	THU	0	0	0	0	1	2	4	4	1	1	0	1	1	1		1	1	1	1	1	1	1	1	2	1.0	23	4
6	FRI	1	0	0	0	0	1	4	4	2	1	0	0	0	0		1	0	0	0	1	1	2	2	1	0.9	23	6
7	SAT	0	1	0	0	0	0	2	2	2	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0.3	23	3
8	SUN	0	0	0	0	0	0	3	5	1	0	1	1	0	0		0	0	0	0	1	1	0	0	0	0.6	23	7
9	MON	0	0	0	0	2	3	5	10	4	1	0	0	0	0		0	0	1	2	2	1	2	2	2	1.6	23	11
10	TUE	1	0	0	0	0	1	2	2	0	0	0	0	0	0			0	0	0	1	0	1	0	1	0.4	22	3
11	WED	0	0	0	0	0	1	2	2	3	2	1	1	0	0		0	1	0	0	0	0	0	0	0	0.6	23	4
12	THU	0	0	0	0	0	1	2	1	0	0	0	0	0	0		0	0	0	1	1	0	0	0	0	0.3	23	3
13	FRI	0	0	0	0	0	1	3	3	2	1	1	0	0	0		0	1	0	1	0	1	1	2	1	0.8	23	3
14	SAT	1	1	1	1	1	1	1	2	2	1	1	0	0	0		0	0	1	1	1	1	0	1	1	0.3	23	2
15	SUN	0	0	0	0	0	0	0	0	0	1	1	1	1	1		1	1	1	2	2	2	1	1	1	0.7	23	2
16	MON	0	0	0	0	0	1			5	3	2	3	3	3			5	5	4	6	5	4	6	4	2.8	20	8
17	TUE	1	1	0	0	0	1			2	1	0	0	0	0			2	2	2	2	2	3	4	3	1.3	20	5
18	WED	1	1	1	1	1	2	6	6	3	1	1	1	1	1		1	1	1	2	5	3	5	7	7	2.5	23	9
19	THU	6	2	2	2	2	3	7	16	13	1	0	0	0	0		0	0	1	5	10	15	11	12	7	5.1	23	25
20	FRI	8	6	5	6	4	4	14	16	10	2	0	0	0	0		0	0	0	0	1	1	2	4	4	3.7	23	18
21	SAT	2	2	0	0	1	1	1	1	1	1	1	1	1	1		1	2	2	1	2	1	1	1	1	1.1	23	4
22	SUN	0	0	0	0	0	0	1	0	0	1	1	1	1	0		0	0	0	1	1	2	2	3	2	0.7	23	4
23	MON	0	0	1	0	1	3	11	8	3	1	1	1				0	1	1	2	4	4	5	4	5	2.7	21	15
24	TUE	3	2	2	2	2	3	5	5	3	2	1	0	0	0			1	0	1	6	7	16	19	13	4.1	22	23
25	WED	13	16	19	19	20	13		32	26	3	0	0	0	0		0	0	0	0	1	1	2	3	1	7.7	22	37
26	THU	1	1	8	19	14	18	23	21	11	3	1	0	0	0		0	0	0	2	2	2	3	2	2	5.7	23	26
27	FRI	1	1	0	2	3	6	11	11	7	3	0	1	0	0		0	1	1	2	2	2	5	8	11	3.3	23	12
28	SAT	10	14	5	2	3	3	7	5	4	2	0	0	0	0		0	0	0	0	0	0	0	0	0	2.3	23	15
29	SUN	0	0	0	0	0	0	0	1	1	1	1	1	1	1			1	1	2	4	6	7	5	2	1.6	22	7
30	MON	1	1	1	1	1	1	4	7	5	3	2	1	1	0		1	1	1	7	9	13	14	12	9	4.1	23	16
MONTHLY MEAN		2	2	2	2	2	3	5	6	4	1	1	0	0	0		0	1	1	1	2	3	3	4	3	2.1		
NO. OF DAYS		30	30	30	30	30	30	27	28	30	30	30	30	29	29		25	30	30	30	30	30	30	30	30		678	
MAX.HRLY MEAN		13	16	19	19	20	18	23	32	26	3	2	3	3	3		1	5	5	7	10	15	16	19	13			

TABLE 3-46 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, OCTOBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	TUE	5	3	2	1	1	2	5	10	12	4	2	1	1			0	0	0	1	2	2	2	3	3	2.7	22	13
2	WED	3	3	2	2	2	2	5	8	7	5	3	1	1	0		0	1	1	1	2	2	2	2	2	2.5	23	8
3	THU	2	2	1	1	1	1	4	8	7	4	1	0	1	2		0	0	0	1	0	1	1	1	1	1.7	23	8
4	FRI	1	1	0	1	1	1	4	6	5	2	1	1	1	1		0	1	1	3	6	10	16	25	29	5.1	23	30
5	SAT	29	27	28	27	32	32	32	26	15	8	4	1	0	0		0	0	0	0	1	3	5	7	13	12.6	23	33
6	SUN	17	15	13	10	7	5	4	5	5	4	3	2	1	1		0	0	0	2	3	3	4	4	4	4.7	23	17
7	MON	2	1	1	0	0	1	3	14		5	2	1	0	0		0	2	2	2	2	2	1	2	1	2.0	22	16
8	TUE	1	1	1	2	1	4	12	14	10	4	1	0	1	0			1	1	1	3	3	5	6	5	3.5	22	20
9	WED	1	1	0	0	1	4	10	8	3	1	1	1	0	0		1	1	1	3	5	11	25	30	33	6.1	23	37
10	THU	41	49	22	19	27	26	32	38	33	5	1	1	0	0		0	1	1	1	5	6	9	15	13	15.0	23	51
11	FRI	12	5	4	2	3	4	10	14	6	2	1	0	0	0		1	2	2	6	6	3	5	3	3	4.0	23	16
12	SAT	4	5	6	4	1	1	3	4	1	1	1	0	0	0		0	0	1	5	5	9	17	26	23	5.0	23	30
13	SUN	16	13	7	8	4	3	4	2	1	1	1	0	0	0		0	0	0	4	4	4	5	9	6	3.9	23	20
14	MON	7	7	11	7	7	8	12	21	19	8	2	0	0	0											7.9	14	24
15	TUE																											
16	WED	18	24	25	29	22	32	27	28	21	15	2	1	0	0		1	1	8	32	63	56	52	52	39	23.7	23	73
17	THU	17	9	6	7	10	20	39	58	15	5	2	1	1	0		0	1	10	9	15	32	49	53	55	18.0	23	71
18	FRI	54	60	43	37	39	45	44	43	23	8	5	2	2	0		0	0	1	7	9	35	43	44	51	25.9	23	65
19	SAT	51	29	27	36	33	27	42	46	30	7	1	1	1	0		0	0	1	2	8	28	31	42	40	21.0	23	58
20	SUN	43	38	35	21	6	15	9	7	3	4	3	2	1	1		0	0	1	6	7	5	6	6	4	9.6	23	50
21	MON	2	1	1	1	3	7	18	9	3	0	0	0	0	0		0	0	2	8	6	8	11	5	2	3.8	23	22
22	TUE	0	0	0	0	0	0	0	1	1	0	0	0	1			1	2	2	2	1	2	1	1	0	0.7	22	3
23	WED	0	0	0	0	0	2	5	6	4	3	2	1	0	0		0	1	0	1	2	3	6	7	10	2.4	23	16
24	THU	8	20	33	32	26	25	32	44	32	8	2	1	1	1		0	1	2	4	7	8	25	33	27	16.1	23	49
25	FRI	43	45	34	25	22	31	41	50	30	8	2	1	0	1		1	2	3	4	5	4	3	8	6	16.0	23	53
26	SAT	5	5	9	8	8	7	7	9	7	7	6	4	2	1		1	1	2	6	7	10	12	13	12	6.3	23	16
27	SUN	13	25	25	22	19	15	11	13	12	6	4	2	2	1		1	1	6	4	4	6	7	4	6	9.1	23	27
28	MON	15	4	1	1	1	1	2	4	5	2	2	2	2	2		2	4	6	7	5	3	3	3	4	3.5	23	19
29	TUE	2	1	1	1	1	1	2	5	7	4	2	2	1	2			3	3	2	1	1		1	0	2.0	21	8
30	WED	0	0	0	0	0	0	1	4	3	2	1	0	1	1				5	5	3	4	4	4	4	2.0	21	7
31	THU	2	2	1	0	0	1	6	18	18	10	4	2	1	1			3	6	3	2	2	2	1	1	3.8	22	21
MONTHLY MEAN		14	13	11	10	9	11	14	17	12	5	2	1	1	1		0	1	2	4	6	9	13	14	14	8.1		
NO. OF DAYS		30	30	30	30	30	30	30	30	29	30	30	30	30	28		25	28	29	29	29	29	28	29	29		672	
MAX.HRLY MEAN		54	60	43	37	39	45	44	58	33	15	6	4	2	2		2	4	10	32	63	56	52	53	55			

TABLE 3-47 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, NOVEMBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI	1	0	0	0	0	1	2	7	7	5	5	5	6	6		9	7	7	6	4	4	3	3	2	3.9	23	12
2	SAT	1	0	1	1	1	0	1	3	3	2	1	1	2	1		2	2	2	3	2	2	1	1	1	1.4	23	4
3	SUN	1	1	0	0	0	0	1	1	1	1	1	1	1	1		1	1	3	5	9	10	17	13	16	3.8	23	21
4	MON	15	19	16	12	7	3	11	20	22	12	6	3	2	1		2	4	7	5	7	6	9	2	3	8.6	23	25
5	TUE	3	2	1	1	0	1	4	8	11	8	5	4	5	3			9	11	9	10	13	14	14	13	6.6	22	16
6	WED																											
7	THU																											
8	FRI																											
9	SAT																											
10	SUN	17	20	24	17	22	23	17	30	12	5	5	3	2	2		1	1	3	4	6	10	5	3	2	10.2	23	35
11	MON	3	4	3	2	3	4	7	8	6	3	1	1	1	0		0	1	5	18	29	30	8	4	2	6.1	23	41
12	TUE	2	2	3	1	0	1	3	10	9			1	1	1			2	4	5	7	12	17	21	24	6.3	20	26
13	WED	20	14	12	25	15	11	13	34	34	30	3	2	1	1		1	2	5	7	7	6	5	4	2	11.0	23	56
14	THU	1	1	0	0	1	2	5	11	9	5	3	2	2	2		2	3	7	4	2	2	3	3	4	3.1	23	15
15	FRI	5	5	4	2	1	1	2	5	6	4	2	2	1	1		2	3	6	7	8	11	14	25	25	6.1	23	30
16	SAT	26	21	12	12	10	8	6	8	8	9	5	4	3	3		1	2	3	4	4	5	4	5	5	7.2	23	30
17	SUN	7	6	4	7	7	6	6	7	7	4	1	0	0	0		0	1	1	2	3	3	2	1	1	3.3	23	9
18	MON	1	0	0	1	1	0	3	9	11	6	3	2	3	2		1	6	8	7	5	4	7	3	1	3.6	23	13
19	TUE	0	0	0	0	0	0	1	5	6	3	2	1	1	0			2	5	9	14	12	14	20	27	5.5	22	29
20	WED	29	15	11	8	8	8	18	29	22	13	5	4	2	1		1	3	4	4	3	2	2	2	1	8.3	23	34
21	THU	1	1	1	0	1	1	3	6	10			5	2	2		2	6	12	15	12	7	6	7	7	5.0	21	16
22	FRI	23	36	30	27	20	18	19	27	27	23				5		1	3	1	1	0	0	0	0	0	13.1	20	39
23	SAT	0	0	0	0	0	0	0	0	1	0	0	1	1	0		1	1	2	3	4	2	0	0	0	0.7	23	5
24	SUN	0	0	0	0	0	0	0	0	0	1	0	1	1	1		1	1	2	2	3	3	3	3	5	1.1	23	6
25	MON	4	2	2	2	1	1	3	6	4	2	0	0	0	0		1	1	3	4	5	3	3	2	1	2.3	23	7
26	TUE	1	1	0	0	0	0	3	6	9	6	4			1		2	4	5	4	4	4	2	2	1	2.7	21	10
27	WED	1	1	0	0	0	0	3	9	16	13	7	3	1	0		1	7	13	22	30	51	50	52	67	15.1	23	72
28	THU	68	64	58	61	50	43	37	29	16	8	6	2	0	0		0	0	1	2	3	5	5	5	3	20.3	23	70
29	FRI	1	0	0	0	0	0	0	1	3	2	2	1	0	0			3	2	2	1	1	1	0	1	1.0	22	5
30	SAT	0	0	0	0	0	0	0	1	1	2	1	1	1	1		1	2	2	3	2	2	1	1	2	1.0	23	3
MONTHLY MEAN		9	8	7	7	6	5	6	11	10	7	3	2	2	1		1	3	5	6	7	8	7	8	8	6.0		
NO. OF DAYS		26	26	26	26	26	26	26	26	26	24	23	24	24	26		22	26	26	26	26	26	26	26	26		585	
MAX.HRLY MEAN		68	64	58	61	50	43	37	34	34	30	7	5	6	6		9	9	13	22	30	51	50	52	67			

TABLE 3-48 HOURLY AVERAGES OF NITRIC OXIDE, pphm (colorimetric analysis) WASHINGTON, DECEMBER 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	2	1	0	0	1	2	2	4	5	4	1	1	1	1			2	3	4	4	4	6	9	11	3.0	22	14
2	MON	13	9	5	5	4	3	7	10	17	18	12	4	3	2		6	7	11	4	3	3	3	3	3	6.7	23	21
3	TUE	7	11	8	5	6	7	8	12	11	12	11	9	5	5		3	4	5	4	2	2	1	0	0	6.0	23	14
4	WED	0	0	0	0	0	0	1	5	6	5							3	4	6	6	6	6	5	4	3.1	18	7
5	THU	2	0	0	0	0	0	2	8	9	5	5	2		5											3.0	13	12
6	FRI																											
7	SAT																											
8	SUN																											
9	MON																											
10	TUE	2	1	1	0	1	2	4	5	5	4	2	2	3	2			2	4	3	2	3	2	2	1	2.3	22	6
11	WED	0	0	0	0	0	1	3	5	9	7	5	3	2	2		1	3	8	6	4	4	3	2	3	3.1	23	10
12	THU	2	2	1	1	1	1	3	6	10	9	6	6	4	5		4	7	10	19	13	20	25	21	16	8.3	23	28
13	FRI	20	15	16	13	10	15	11	16	13	12	5	2	2	1			4	5	5	5	6	6	6	6	8.8	22	22
14	SAT	5	4	4	3	2	2	3	6	6	5	5	3	3	3		2	2	2	2	2	1	2	2	1	2.9	23	7
15	SUN	1	1	0	0	0	0	0	1	1	1	1	2	1	1		1	2	2	3	2	2	1	1	1	1.1	23	3
16	MON	1	0	0	0	0	1	2	5	7		3	2	2	2		2	4	5	5	3	4	4	2	1	2.5	22	9
17	TUE	1	0	0	0	0	1	3	6	7	5		2	1	1			4	6	5	5	7	6	5	4	3.2	21	8
18	WED	4	2	2	2	2	3	3	6	7	5			6	5		6	7	9	1	0	0				3.8	18	11
19	THU																											
20	FRI																											
21	SAT																											
22	SUN	3	3	1	1	1	2	2	2	4	3	3	2	1	2		1	3	4	5	7	9	10	8	12	3.8	23	13
23	MON	11	14	16	18	12	9	11	15	18	14	7	5	5	4		5	8	7	7	7	6	6	4	4	9.4	23	24
24	TUE	5	3	3	2	3	3	6	9	11			3	3	3			9	12	7	5	4	5	5	5	5.2	20	14
25	WED	2	4	11	9	9	8	3	7	4	4	2	2	1	1		0	0	2	2	4	6	7	11	7	4.5	23	16
26	THU	16	29	11	13	13	8	13	21	15	7	4	3	4	6		4	7	10	8	8	10	22	45	67	14.8	23	77
27	FRI	78	87	35	13	13	19	27	37	33	14	12	16	7	2		1	3	4	5	4	5	8	7	17	19.4	23	103
28	SAT	13	13	15	5	2	1	0	1	3	3	3	2	1	1		1	3	4	6	8	9	7	7	5	4.9	23	18
29	SUN	6	5	4	3	3	2	4	5	8	7	5	2	1	2		1	0	2	4	5	4	2	1	0	3.3	23	8
30	MON	0	0	0	0	0	0	0	1	3	1	0	0	0					4	5	4	5	8	12	12	2.7	20	14
31	TUE																											
MONTHLY MEAN		8	9	6	4	4	4	5	8	9	7	5	4	3	3			4	6	5	5	5	7	7	9	5.6		
NO. OF DAYS		23	23	23	23	23	23	23	23	23	21	19	21	21	21		15	21	22	22	22	22	21	21	21		497	
MAX.HRLY MEAN		78	87	35	18	13	19	27	37	33	18	12	16	7	6		6	9	12	19	13	20	25	45	67			

TABLE 3-49 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis)

WASHINGTON, JANUARY 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON																											
2	TUE																											
3	WED	4	3	2	2	2	2	2	2	2			12	6	3		6	7	7		5	4	4	2	2	3.8	20	15
4	THU	2	2	2	2	2	2	2	3	3	3	3	3	3			3	4	4	4	4	4	4	4	3	2.9	22	5
5	FRI																											
6	SAT	3	3	3	3	3	3	3	3	3	3	4	5	5	5			6	5	6	7	6	6	4	3	4.2	22	9
7	SUN	4	3	2	2	2	2	2	2	2	2	2	3	3	4			2	2	2	1	1	1	1	1	2.1	22	4
8	MON	1	2	2	2	2	2	2	2	2	2	3		3	4		2	3	2	3	3	3	3	3	3	2.3	22	4
9	TUE	3	3	3	3	3	3	3	3	3	3	3	3	3	3		2	3	3	3	3	3	3	3	2	2.9	23	4
10	WED	2	2									2	2	3	3			3	2	2	3	2	2	2	2	2.3	14	3
11	THU	2	3	3	2	2	2	3	3	3	3	3	3	3	3			3	3	4	3	3	3	3	3	2.8	22	4
12	FRI	3	3	2	2	2	2	2	2	2	4	3	4	3	3					3	4	3	3	4	3	2.9	20	4
13	SAT	3	2	2	2	2	2	2	2	2	3	2	3	3	4			4	4	5	4	4	3	3	3	2.9	22	5
14	SUN	2	2	2	2	1	1	1	1	1	1	1	1	3	4			4	4	4	4	4	4	4	5	2.6	22	5
15	MON	5	5	4	3	3	3	3	3	3					3			3	3	4	3	3	2	2	2	3.1	18	5
16	TUE	2	3	3	3	3	3	4	4	4	4	3	2	3	3			3	4	3	3	3	3	3	2	3.1	22	6
17	WED	2	1	1	1	1	1	1	1	2	7	5	5	5	5	3			3	3	3	3	3	3	2	2.8	22	9
18	THU	2	2	2	2	2	2	2	2	2	2	2	4	3	3			3	4	4	3	3	3	2	2	2.5	22	4
19	FRI	2	3	3	3	3	2	2	2	2	3	3	3	3	3			3	3	3	3	3	4	5	4	2.9	22	5
20	SAT	4	4	3	4	3	3	3	3	3	3	3	3	3	4			4	4	4	3	3	2	2	2	3.1	22	5
21	SUN	1	1	3	3	3	3	2	2	2	2	2	1	1	2			3	3	3	3	3	4	3	3	2.4	22	4
22	MON	3	2	2	2	2	2	2	2	2	3	2	3	2	2			3	3	3	2	2	3	3	2	2.3	22	3
23	TUE	2							2	2	3	3	3	3	3			4	4	4	4	3	3	3	4	3.1	16	5
24	WED	4	3	3	3	3	3	3	3	2	3	4	3	3	3			1	1	1	1	3	3	3	2	2.6	22	4
25	THU	2	2	2	2	2	2	2	2	3	7	17	14	10	6			4	4	6	6	5	5	5	5	5.1	22	20
26	FRI	3	3	3	2	2	2	2	2	2	4	3	3	3	3			3	2	2	1	1	1	2	2	2.3	22	4
27	SAT	2	2	2	2	2	1	1	2	2	2	1	1	1	3			3	3	3	3	3	2	2	2	2.0	22	3
28	SUN	2	2	1	2	2	2	2	2	2	2	2	2	2	2				3	3	3	2	2	2	3	2.1	21	3
29	MON	2	2	2	2	2	2	2	2	2	3	3	3	3	2			2			2	1	4	3	3	2.4	20	4
30	TUE	3	3	3	2	2	2	2	2	2	4	4		3	2				1		1	1	1	1	1	2.2	19	4
31	WED	1	1	1	1	1	1	2	2	2	3	3	2	3	3		1	3	2	2	4	4	3	3	3	2.2	23	4
MONTHLY MEAN		3	2	2	2	2	2	2	2	2	3	3	4	3	3			3	3	3	3	3	3	3	3	2.8		
NO. OF DAYS		28	27	26	26	26	26	26	27	27	25	26	25	27	27	1	5	24	26	25	28	28	28	28	28		590	
MAX.HRLY MEAN		5	5	4	4	3	3	4	4	4	7	17	14	10	6	3	6	7	7	6	7	6	6	5	5			

TABLE· 3·50 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, FEBRUARY 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU	3	2	2	2	2	2	2	2	2	4	4	3	2	2			2	2	3	4	3	3	3	2	2.5	22	5
2	FRI	2	2	2	2	2	2	2	2	3	4	4	4	4	3				-	4	3	3	3	3	3	2.8	20	4
3	SAT	2	2	2	2	2	2	2	2	2	1	1	1	1	3		1	3	3	3	3	3	3	3	2	2.2	23	4
4	SUN	2	2	2	2	2	2	2	2	2	2	2	2	3	3		3	6	6	6	6	6	5	5	6	3.4	23	7
5	MON	6	5	4	4	3	3	3	3	4							0		7	7	4	3	2	2	2	3.7	17	8
6	TUE	2	1	1	1	1	1	2	2	2	3	3	2	3	3			2	3	2	2	2	2	1	3	2.0	22	4
7	WED	3	3	3	2	2	2	3	3	3	4	4	4	4	4				0	3	2	2	2	1	1	2.6	21	4
8	THU	1	1	1	1	1	1	1	1	1	3	3	3	3	3			0	1	3	3	4	4	4	4	2.2	22	5
9	FRI	4	3	3	3	2				5	4	4	3	3		0	0	3	2	3	3	3	2			2.8	18	5
10	SAT	2	1	1	1	1	1	1	1	1	1	1	1	1			4	4	4	4	3	3	3	3	3	1.9	22	4
11	SUN	3	3	3	3	3	3	3	4	4	4	4	4	4		1	4	4	4	4	4	4	3	3	3	3.5	23	5
12	MON	3	3									4	4	4	4		1	3	4	4	4	4	3	3	3	3.4	15	4
13	TUE	4	4	3	2	2	2	2	2	2	5	7	7	5	4			4	4	3	3	3	5	4	4	3.6	22	7
14	WED	3	3	2	2	2	2	2	3	3	4	4	4	5	5			3	3	2	2	3	3	3	2	2.9	22	5
15	THU	2	1	1	1	1	1	2	2	2	3		3	3	2			4	4	4	6	6	5	5	5	3.0	21	6
16	FRI	5	5	4	3	3	3	3	3	3	5	5	5	5	5			2	2	2	2	4	4	4	4	3.7	22	5
17	SAT	4	3	3	3	3	3	2	2	2	2	3	3	3	3			3	4	4	4	5	5	4	4	3.3	22	5
18	SUN	4	3	3	3	3	3	3	3	2	2	2	3	3	3			3			4	4	3	3	3	2.9	20	4
19	MON	2	2	1	1	2	2	2	2	2	3	4	4	4	4			4	4	3	3	3	4	3	2	2.7	22	4
20	TUE	2	2	2	1	0	0	1	1	1	1	1	1	0	0			0	0	0						0.8	17	2
21	WED																											
22	THU	2	2	2	2	2	2	2	2	2	2	2	2	5	5			8	7	5	3	3	3	2	2	3.0	22	8
23	FRI	4	4	4	4	3	3	3	3	3	4	4	5	5	5			3	3	3	3	3	3	3	2	3.5	22	5
24	SAT	2	1	1	2	2	2	2	2	2	2	2	2	1	3			4	4	4	4	4	4	3	3	2.6	22	4
25	SUN	3	3	2	2	2	2	2	3	2	2	2	2	2	2			4	4	4	3	3	2	2	1	2.4	22	4
26	MON	1	1	0	0	0	0	0	0	1	4	5	4		5			3	3	4	4	3	3	4	4	2.2	21	5
27	TUE	3	2	2	2	2	2	2	2	2	3	3	3	4	3			3	4	4	4	3	2	2	1	2.7	22	4
28	WED	2	3	3	2	2	2	1	1	1	2	3	3	3	3			5	4	3	3	3	3	3	2	2.6	22	6
MONTHLY MEAN		3	2	2	2	2	2	2	2	2	3	3	3	3	3			3	3	3	3	3	3	3	3	2.8		
NO. OF DAYS		27	27	26	26	26	25	25	25	26	25	25	26	25	23	2	7	24	25	26	26	26	26	25	25		569	
MAX. HRLY MEAN		6	5	4	4	3	3	3	4	5	5	7	7	5	5	1	4	8	7	7	6	6	5	5	6			

TABLE 3-51 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, MARCH 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU	2	2	1	1	1	1	2	2	3	3	3	3	3	3			4	4	5	4	4	4	3	3	2.7	22	5
2	FRI	3	2	2	2	1	2	2	2	3	3	3	3	3	3			3	4	5	5	5	4	4	3	3.0	22	5
3	SAT	3	3	3	3	2	2	2	2	2	2	2	2	2	3			4	4	4	4	4	4	4	3	2.9	22	4
4	SUN	4	3	3	3	2	2	2	2	2	2	2	2	3	3			5	6	6	4	4	4	4	4	3.3	22	8
5	MON	4	4	3	3	3	3	3	3	3	4	5	5	4	4			3	3	3	2	2	3	3	3	3.3	22	5
6	TUE	3	2	1	1	1	1	2	2	2	2	2	3	3	3			3	2	3	4	4	4	4	4	2.6	22	5
7	WED	3	3	3	3	3	3	4	4	4	5	7	6	5	5			3	4	5	6	5	4	4	3	4.2	22	10
8	THU	3	2									4	3	3	3			4	5	5	6	5	5	5	4	4.0	14	6
9	FRI	3	3	3	3	3	3	3	3	3	5	4	4	4	4		1	4	4	3	4	4	3	3	3	3.3	23	6
10	SAT	3	2	2	3	3	2	3	2	2	2	3	3	3	3		2	5	5	5	6	7	7	7	7	3.7	23	7
11	SUN	7	5	4	4	3	3	3	3	2	2	2	2	2	2		2	4	4	4	3	2	2	3	3	3.1	23	7
12	MON	2	2	2	3	3	3	3	3	3	5	4	4	4	4		2	6	5	6	7	8	7	6	5	4.2	23	8
13	TUE	5	3	3	2	2	3	3	4	4	6	6	5	5	5			5	5	5	5	5	3	4	3	4.0	22	7
14	WED	3	2	1	1	1	1	3	3	3	4	4	4	3	4		2	4	4	4	4	4	4	4	3	3.0	23	5
15	THU	3	3	2	1	1	2	3	3	3	4	3	3	3	3		1	4	5	5	5	5	5	4	3	3.2	23	6
16	FRI	3	3	3	3	3	2	3	3	4	3	3	4	3	3		1	4	4	4	5	4	4	4	4	3.4	23	5
17	SAT	4	3	3	2	2	2											5	5	5	6	6	6	6	5	4.2	14	6
18	SUN	5	4	3	3	3	3	3	3	3	2	2	3	2	4		1	3	4	5	5	5	5	5	5	3.5	23	5
19	MON	5	5	5	5	5	5	4				5	5	4	4		1	4	5	6	6	5	5	5	4	4.6	20	7
20	TUE	3	3	3	3	2	3	3	3	3	5	4	3	3	3											3.1	14	6
21	WED																											
22	THU																											
23	FRI																											
24	SAT	6	5	5	5	3	4	4	4	4	4	3	3	3	3			3	4	5	5	5	5	5	5	4.2	22	6
25	SUN	5	3	2	2	2	2	2	1	1	1	1	1	2	2			2	4	5	6	6	6	5	5	3.0	22	6
26	MON	4	4	3	3	4	4	4	4	4	3	3	3	2	1			4	4	4	6	6	6	5	4	3.8	22	7
27	TUE	4	3	2	3	4	4	4	5	5	4	3	2	2	2			4	5	4	5	5	4	4	3	3.6	22	6
28	WED	3	3	3	3	4	4	5	6	6	4	3	2	2	2		3	4	5	7	8	8	8	7	6	4.6	23	9
29	THU	5	4	4	5	5	5	6	7	7	6	6	7	5	4		5	8	9	9	8	8	6	6	6	6.0	23	9
30	FRI	5	4	4	4	4	6	7	7	7	6	5	5	4	6		5	7	7	7	6	6	5	4	5	5.4	23	7
31	SAT	4	5	5	5	5	4	3			4	4	4	3	3		3	4	5	5	5	5	4	3	3	4.0	23	6
MONTHLY MEAN		4	3	3	3	3	3	3	3	3	4	4	3	3	3			4	5	5	5	5	5	4	4	3.7		
NO. OF DAYS		28	28	27	27	27	27	26	25	25	25	27	27	27	27		13	27	27	27	27	27	27	27	27		602	
MAX.HRLY MEAN		7	5	5	5	5	6	7	7	7	6	7	7	5	6		5	8	9	9	8	8	8	7	7			

TABLE 3-52 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, APRIL 1962

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	4	3	3	3	3	3	3	4	1	2	2	2	2	2		2	2	3	4	3	2	3	2	2	2.7	23	4
2	MON	1	1	1	1	1	2	2	3	3	2	1			2		4	5	5	5	5	5	5	5	5	3.0	21	6
3	TUE	4	4	3	3	3	3	4	5	4	3	2	3	3	3		3	5	5	5	5	6	6	6	6	4.0	23	6
4	WED	7	6	7	7	6	5	7	6	7	5	5	5	4	4		6	5	6	6	7	6	6	6	5	5.7	23	8
5	THU	4	4	4	5	3	5	6	6	6	5	5	3	4	3			5	7	7	6	4	5	6	5	4.9	22	8
6	FRI	5	4	3	4	3	4	6	7	8	7	6	7	7	6		4	4	5	4	5	4	4	3	3	4.9	23	8
7	SAT	4	3	2	2	2	2	2	3	4	5	4	4	4	4		4	5	7	6						3.7	18	7
8	SUN																											
9	MON	2	2	2	2	1	1	1	2	2	0			0	0		3	4	5	3	3	3	3	4	4	2.3	21	6
10	TUE	3	2	1	1	1	2	4	4	3	3	2	2	2	2		3	4	5	5	5	5	5	5	5	3.3	23	6
11	WED	5	5	6	5	5	5	5	5	5	4	4	4	4	4		4	5	5	5	4	4	5	4	4	4.5	23	7
12	THU	4	4	4	4	3	4	4	4	4	4	4	4	4	4		5	5	5	5	5	4	4	4	4	4.1	23	5
13	FRI	4	3	3	3	3	4	3	4	4	4	4	4	3	4		4	5	5	5	3	4	3	3	3	3.6	23	5
14	SAT	3	2	2	2	1	2	2	3	3	3	3	3	3	3		3	3	3	4	4	5	5	5	5	3.1	23	6
15	SUN	5	5	4	4	3	3	3	2	2	2	2	3	2	3		2	2	2	3	4	3	3	3	2	2.9	23	5
16	MON	2	2	2	1	1	2	2	3	2	2	2		3	3		4	4	5	5	5	5	5	4	4	3.1	22	7
17	TUE	4	3	3	3	3	4	4	5	4	4	3		3	3		3	4	4	4	5	5	5	5	5	3.9	22	5
18	WED	4	4	4	4	1	2	3	3	2	1	0	0	0	0			1	2	3	3	3	2	2	2	2.1	22	6
19	THU	2	2	2	2	1	1	2	2	2	0	0	0	0	0			0	1	2	3	0	0	1	2	1.1	22	3
20	FRI	2	0	0	0	0	0	0	0	0	0	0	0	0	0			3	3	3	3	3	3	3	2	1.1	22	4
21	SAT	2	1	1	1	1	1	1	1	2	1	0	0	0	0			0	0	1	3	4	4	3	3	1.3	22	4
22	SUN	2	2	1	1	1	0	1	1	1	1	1	2	0	0			1	1	2	4	5	6	6	5	2.0	22	6
23	MON	5	3	2	4	4	4	5	6	7	2	1	2	2	2			5	6	6	6	5	4	4	3	3.9	22	8
24	TUE	2	2	2	2	3	3	3	3	2	1	1	1	0	1			1	1	1	4	4	5	5	4	2.3	22	5
25	WED	3	3	3	4	4	3	3	2	4	3			0	0			0	1	2	2	3	2	2	2	2.2	20	5
26	THU	2	1	2	2	2	2	2	4	7	7	5	5	2	1		2	2	4	4	3	3	4	3	3	3.0	23	9
27	FRI	2	2	2	2	2	2	2	2	3	2	2	2	2	1			3	3	3	3	3	2	2	2	2.2	22	3
28	SAT	2	1	1	1	1	1	1	1	1	1	1	1	1	0			1	1	1	1	1	1	1	1	0.9	22	2
29	SUN	1	1	1	1	1	0	0	1	0	1	1	1		0	0		2	2	1	1	1	1	1	1	0.8	22	2
30	MON	1	0	0	0	0	0	1	1	1	1	0	0		2	2		1	2	2	2	2	3	2	2	1.1	22	3
MONTHLY MEAN		3	3	2	2	2	2	3	3	3	3	2	2	2	2		3	3	4	4	4	4	4	4	3	2.9		
NO. OF DAYS		29	29	29	29	29	29	29	29	29	29	27	24	26	29	2	16	29	29	29	28	28	28	28	28		641	
MAX.HRLY MEAN		7	6	7	7	6	5	7	7	8	7	6	7	7	6	2	6	5	7	7	7	6	6	6	6			

TABLE 3-53 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, MAY 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	TUE	2	2	2	1	2	2	2	1	1	1	1	1	1	1			2	3	3	2	2	2	2	2	1.7	22	5
2	WED	1	1	1	1	1	1	2	2	2	2	2	2	2	2		2	3	3	3	2	3	2	2	2	1.9	23	3
3	THU	2	2	2	2	2	1	1	2	3	3	3		0	0				3	4	4					2.1	16	5
4	FRI		3	3	2	3	4	4		7	2	1	1	0	0		4	4	5							2.8	15	8
5	SAT		4	3	3	3	3	4	5	5	3	1	1	2	1		1	1	2	3	4	4	4	4	3	2.9	22	7
6	SUN	3	3	3	2	3	3	3	4	3	3	2	1	1	1		1	1	2	1	2	2	2	1	1	2.1	23	4
7	MON	0	1	1	1	1	2	3	3	2	1		1	1	1		2	3	2	2	4	5	5	4	4	2.2	22	5
8	TUE	4	5	4	3	3	2	2	2	1	1	1	1	1	1		3	4	4	4	3	3	3	2	2	2.5	23	5
9	WED	2	3	2	3	2	2	2	2	1	1	0	1	0	1		2	2	2	2	3	4	4	4	4	2.2	23	5
10	THU	4	3	1	1	2	2	4	4	3	1	1	1				4	5	4	4	3	3	3	2	2	2.6	21	5
11	FRI	2	1	1	1	2	3	4	4	4	4	3	4	4	2		2	3	3	3	3	2	2	2	3	2.7	23	4
12	SAT	4	4	4	4	3	3	4	3	3	2	2	2	2	1		2	2	1	2	4	3	4	3	3	2.7	23	5
13	SUN	2	2	1	1	1	2	2	4	4	4	3	2	2	2		2	1	2	2	2	2	2	2	1	2.1	23	5
14	MON	0	0	0	0	0	1	1	1	1	0						4	5	4	5	5	5	6	5	5	2.5	19	6
15	TUE	5	5			4	4	6	6	4	2	1	1				2	3	3	3	5	5	2	2	3	3.4	19	9
16	WED	3	2	2	2	2	2	3	4	3	2				2		2	2	2	2	2	2	2	2	2	2.3	20	4
17	THU	1	1	1	1	1	2	2	3	3	3	3		4	3	3	3	3	6	6	5	5	4	4	3	3.0	23	7
18	FRI	3	3	2	3	3	3	5	7	4	2	1	1	1	1			2	2	4	6	8	8	6	6	3.7	22	8
19	SAT	6	6	5	3	2	2	4	4	3	2	1	1	1	1		1	1	2	2	2	3	3	3	2	2.6	23	6
20	SUN	2	2	1	2	2	2	2	2	2	1	1	1	1	1		1	1	2	3	4	5	5	4	4	2.2	23	6
21	MON																											
22	TUE																											
23	WED																											
24	THU	2	3	3	3	2	3	4	5	3	3	2	3	2	2		3	4	3	4	4	4	4	4	4	3.1	23	5
25	FRI	3	3	3	3	3	4	6	5	4	2	1	1	1	1		2	2	2	3	5	7	8	6	5	3.5	23	8
26	SAT	5	5	3	2	4	3	3	2	2	1	1	2	1	1		1	1	1	2	2	5	5	3	3	2.6	23	6
27	SUN	2	1	1	1	2	2	2	2	2	2	2	2	1	1		2	2	2	3	4	4	4	4	4	2.2	23	4
28	MON	4	4	3	3	2	3	4	4	3	3	3	3				3	3	3	2	3	3	2	3	3	3.0	21	4
29	TUE	2	2	1	1	2	2	3	2	1	1	1	1	0			3	3	2	2	2	3	2	2	2	1.8	22	3
30	WED	1	2	2	1	2	2	2	2	2	2	2	2	2	2		1	1	1	3	3	4	4	4	3	2.1	23	4
31	THU	3	2	2	2	2	2	2	4	3	2	2	2	1	1		5	5	4	3	3	3	3	3	3	2.8	23	5
MONTHLY MEAN		3	3	2	2	2	2	3	3	3	2	2	1	1	1		2	3	3	3	3	4	4	3	3	2.5		
NO. OF DAYS		26	28	27	27	28	28	28	27	28	28	25	24	23	23	1	25	27	28	27	27	26	26	26	26		609	
MAX.HRLY MEAN		6	6	5	4	4	4	6	7	7	4	3	4	4	3	3	5	5	6	6	6	8	8	6	6			

TABLE 3-54 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, JUNE 1962

DAY - OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI	3	2	2	2	2	2	3	4	4	2	1	1	1	2			3	3	4	5	5	5	4	4	2.9	22	5
2	SAT	4	4	3	4	4	4	5	7	4	2	2	2	2	2		1	2	3	3	4	5	3	4	5	3.4	23	9
3	SUN	4	3	2	2	3	3	2	2	2	2	2	2	3	3		3	3	2	2	3	4	5	6	5	2.9	23	6
4	MON	5	4	5	3	2	3	4	3	3	2	2	2	2	1		3	3	2	2	2	2	2	2	1	2.5	23	5
5	TUE	1	1	1	0	1	2	2	2	2	2	2	2	2			4	5	4	4	4	4	4	4	3	2.5	22	5
6	WED	3	3	1	1	1	2	3	3	2	1	1	1	1	1			3	3	3	5	6	5	5	5	2.7	22	6
7	THU	5	1	1	1	1	3	3	3	3	2	1	2	1	1		2	2	2	2	4	7	4	2	2	2.4	23	7
8	FRI	2	2	2	1	2	3	4	6	5	2	1	1	1	2		3	3	4	4	5	5	4	6	5	3.2	23	7
9	SAT	5	4	3	2	3	5	5	6	6	3	3	3	2	2		2	2	2	2	3	3	3	4	3	3.3	23	6
10	SUN	2	3	3	3	2	4	2	2	2	2	2	2	2	2		2	2	3	3	3	4	4	4	3	2.5	23	4
11	MON	3	4	3	4	3	3	3	4	4	3	3	3	3	2		5	5	3	4	5	4	3	2	2	3.3	23	6
12	TUE	2	7	1	2	2	2	3	3	4		2	2					5	4	3	4	4	3	2	2	2.8	19	6
13	WED	3	2	2	2	2	2	2	2	2				3	3		4	4	4	4	4	4	3	3	3	2.8	20	4
14	THU	2	1	1	1	1	1	1	1	1	1	1	1	1	1		2	2	2	1	1	2	1	2		1.2	22	3
15	FRI																											
16	SAT	3	2	2	2	2	2	2	2	1	1	1	0	1	1			1	1	1	2	4	5	4	3	2.0	22	5
17	SUN	2	3	3	2	2	2	2	2	2	1	1	0	1	0			0	0	0	2	4	4	4	3	1.8	22	4
18	MON	2	1	0	0	1	2	3	4	1	0	0	0	0		0	1	2	2	2	4	5		3	3	1.7	22	6
19	TUE	3	2	1	2	2	2	4	5	3	2	1	1	1			4	4	5	5	4	4	3	3	2	2.9	22	6
20	WED	2	1	1	1	2	2	2	3	3	3	1					6	5	6	4	4	3	2	2	2	2.7	20	6
21	THU	2	1	1	0	1	1	1	2	2	1	0	0	0	0			2	2	2	4	5	5	5	5	1.8	22	6
22	FRI	5	4	3	2	2	2	3	4	5	4	4	2	2	3		3	3	3	4	4	3	3	3	3	3.2	23	7
23	SAT	2	1	2	2	2	2	2	2	2	1	2	1	2	1			2	3	3	3	3	2	2	2	2.0	22	4
24	SUN	2	2	2	2	2	2	2	1	0	2	2	1	1	1			1	1	2	1	2	4	4	3	1.8	22	6
25	MON	3	2	2	1	1	2	3	3	2	2	1	1	1					1	1	2	2	3	5	5	2.0	20	5
26	TUE	6	6	4	3	3	3	4	7	14	9	6	5	5			3	4	2	2	3	3	3	3	3	4.6	22	17
27	WED	3	4	3	2	1	2	2	2	4	3			1	1		2	2	1	1	3	2	3	3	2	2.2	21	4
28	THU	3	3	3	3	3	3	4	4	4	3	3	3	2	2		3	2	2	2	3	3	3	3	3	2.7	23	4
29	FRI	1	2	3	2	1	1	1	2	2	2	1	0	0	0			3	2	2		3	3	3	2	1.7	21	3
30	SAT	2	2	2	2	2	2	1	1	1	1	1	1	1	1		1	0	1	1	2	4	3	4	5	1.8	23	6
MONTHLY MEAN		3	3	2	2	2	2	3	3	3	2	2	2	1	1		3	3	3	3	3	4	3	3	3	2.5		
NO. OF DAYS		29	29	29	29	29	29	29	29	29	27	27	26	27	22	1	19	28	29	29	28	29	28	29	28		638	
MAX. HRLY MEAN		6	6	5	4	4	5	5	7	14	9	6	5	5	3	0	6	5	6	5	5	7	5	6	5			

TABLE 3-55 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, JULY 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	5	5	4	3	2	2	2	1	0	0	0	0	1	1		1	1	1	1	2	2	3	2	1	1,7	23	5
2	MON	1	1	1	1	1	1	2	2	3	1	1	2	2	2		3	3	2	2	2	2	2	1	1	1,7	23	4
3	TUE	2	1	1	1	0	1	1	1	2	2	2	2	1	1				4	4	4	4	3	3	3	1,9	21	4
4	WED	3	3	2	2	3	2	2	3	2	2	1	2	2	2			1	1	1	2	3	4	4	3	2,1	22	5
5	THU	3	3	3	2	2	2	3	9	5	2	1	1	1	1			1	1	1	2	2	2	2	1	2,3	22	12
6	FRI	2	3	2	1	1	2	3	7	3	3	2	1	1	1			2	2	1	2	3	3	2	3	2,0	22	4
7	SAT	3	2	1	2	3	3	3	4	4	4	3	1	1	2		1	1	3	3	3	4	4	3	4	2,6	23	4
8	SUN	3	3	2	2	2	2	2	2	2	2	2	2	2	1		2	2	2	2	3	2	2	3	4	2,1	23	4
9	MON	3	3	2	2	1	2	2	3	3	3	2	2	1				1	0	0	2	1	1	0	0	1,6	21	4
10	TUE	0	0	0	0	0	0	1	2	1	0	0	0	0	0				2	2	3	4	4	4	4	1,3	21	4
11	WED	4	4	4	2	3	4	6	7	5	3			2	3		3	3	3	3	4	5	6	7	5	4,1	21	8
12	THU	4	3	3	3	4	4	5	7	6	5	3	3	3	3		3	3	4	3	4	6	6	5	5	4,2	23	9
13	FRI	5	5	3	1	1	3	4	3	2	1	1	1	1	2		3	3	4	4	5	7	7	7	8	3,4	23	8
14	SAT	9	10	9	8	8	8	10	12	10	6	7					3	3	4	4	6	7	7	7	4	7,0	20	16
15	SUN																											
16	MON																											
17	TUE	3	3	4	4	3	3	4	5	4	4	4	4	3			2	3	2	3	3	3	3	3	2	3,2	22	5
18	WED	1	1	1	1	1	2	3	3	3	4	4	3	3	4		7	5	6	9	7	5	5	6	5	3,9	23	9
19	THU	4	4	4	3	3	3	4	9	7	4	2	1	1	1		3	2	2	2	5	5	5	4	4	3,6	23	10
20	FRI	3	3	3	2	2	2	2	4	6	7	4	2	2	3		4	5	4	5	4	4	4	4	3	3,4	23	8
21	SAT	2	2	1	1	1	1	2	2	2	2	2	1	1	1		2	3	2	3	4	5	4	4	4	2,3	23	5
22	SUN	5	4	3	1	1	1	1	1	1	1	1	1	2	2		1	1	2	2	2	4	5	4	4	2,1	23	5
23	MON	3	3	2	2	2	2	2	2	3	3	2	3	3			3	4	3	2	3	2	4	3	3	2,6	22	4
24	TUE	2	3								1	1	1	1	1			2	1	1	2	3	4	5	4	2,0	15	5
25	WED	5	5	4	3	3	3	4	5	6	5							3	2	2	2	3	3	4	3	3,4	18	6
26	THU	4	4	3	3	2	2	3	6	6	1	2	2	1	2		2	2	2	2	2	2	2	2	2	2,7	23	9
27	FRI	2	3	2	1	1	2	3	3	2	1	1	1	1	1		2	2	2	2	3	3	3	4	4	2,1	23	4
28	SAT	4	4	4											1		1	1	1	2	3	3	3	4	2	2,5	13	4
29	SUN	2	1	1	1	1	2	2	2	3	3	2	2	2	3		4	4	4	4	4	4	3	3	3	2,6	23	5
30	MON	3	3	3	2	2	2	3	3	3	3	3	2	3			3	4	3	2	2	3	2	3	3	2,6	22	5
31	TUE	1	1	1	0	1	2	3	4	5	5	2	1	0	0			2	1	2	2	3	3	4	4	2,0	22	5
MONTHLY MEAN		3	3	3	2	2	2	3	4	4	3	2	2	2	2		3	2	2	3	3	4	4	4	3	2,7		
NO. OF DAYS		29	29	28	27	27	27	27	27	27	28	26	25	26	23		20	27	29	29	29	29	29	29	29		626	
MAX.HRLY MEAN		9	10	9	8	8	8	10	12	10	7	7	4	3	4		7	5	6	9	7	7	7	7	8			

TABLE 3-56 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, AUGUST 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	WED	4	3	3	2	1	3	5	6	5	4	0			2		3	3	3	4	7	9	9	8	6	4.2	21	10
2	THU	5	5	4	4	4	4	5	7	4	2	1	1	1	1		2	2	4	2	2	2	4	4	4	3.3	23	9
3	FRI	3	2	2	2	2	3	4	6	7	4	4	4	4	2		3	4	4	5	4	4	4	4	4	3.6	23	8
4	SAT	4	3	2	2	3	4	4	3	4	2			2	4		4	2	2	2	3	5	5	5	5	3.3	21	5
5	SUN	4	2	2	1	1	1	1	1	2	2	2	2	1	1			2	2	2	2	2	2	3	2	1.8	22	4
6	MON																											
7	TUE																											
8	WED																											
9	THU																											
10	FRI																											
11	SAT	2	2	2	2	2	2	2	2	2	2	2	1	1	2		1	1	2	2	4	5	4	5	4	2.3	23	5
12	SUN	4	4	3	4	4	4	5	5	3	2	3	2	2	1		1	1	1	2	2	4	4	5	4	3.1	23	7
13	MON																											
14	TUE																											
15	WED	3	2	2	2	2	2	3	4	2	2	2	2	1	3		3	4	4	4	6	5	4	4	3	3.1	23	7
16	THU	3	2	2	2	2	3	4	5	4	4	3	4	5	4		4	6	6	5	7	7	6	5	4	4.3	23	8
17	FRI	4	4	3	3	2	3	4	7	6	4	2	2	2	3		3	3	3	3	6	6	6	7	5	3.9	23	11
18	SAT	3	3	2	2	2	2	3	2	2	2	2	1	2	2		2	2	2	3	4	5	4	4	4	2.5	23	5
19	SUN	4	4	3	3	3	3	3	3	3	2	3	2	2	2		2	3	2	3	3	3	3	3	2	2.7	23	5
20	MON	3	2	3	3	2	3	4	4	4		3	3	3	2		3	4	3	2	3	3	3	2	2	2.9	22	5
21	TUE	1	1	1	2	3	4	4	6	6	4	2	1	3				4	3	3	3	4	5	4	4	3.2	21	7
22	WED	3	4	2	1	2	2	3	3	2	2				2		1	2	2	2	2	4	4	4	4	2.5	20	5
23	THU	4	5	4	4	4	4	4	5	3	2	2	2	1	1		3	3	2	2	4	3	2	2	1	2.9	23	6
24	FRI	1	2	1	2	2	3	3	4	3	2	1	1	1	2		2	2	2	2	4	4	4	4	3	2.4	23	5
25	SAT	3	2	2	3	3	3	3	4	2	1	1	2	1	1		2	2	3	3	3	4	4	3	3	2.5	23	5
26	SUN	3	2	3	3	3	3	3	4	2	1	1	1	1	1		1	1	1	3	3	2	2	3	2	2.1	23	4
27	MON	2	2	2	2	2	2	3	4	5	3	3	2	1	0		3	2	1	2	1	1	1	1	1	1.9	23	5
28	TUE	1	1	0	0	1	1	1	1	2	1	1	1					3	3	3	4	4	3	2	2	1.7	20	5
29	WED	1	0	0	0	1	1	2	2	1	0	0	0	0	0			0	0	2	4	5	4	4	4	1.4	22	5
30	THU	2	2	2	2	2	3	4	5	5	2	1	1	1	1		2	2	2	4	7	8	8	8	8	3.6	23	9
31	FRI	7	6	6	5	5	5	7	11	16	14	9	3	2	2		3	4	3	3	3	4	4	3	3	5.6	23	17
MONTHLY MEAN		3	3	2	2	2	3	3	4	4	3	2	2	2	2		2	3	3	3	4	4	4	4	3	3.0		
NO. OF DAYS		24	24	24	24	24	24	24	24	24	23	22	21	21	22		20	24	24	24	24	24	24	24	24		537	
MAX.HRLY MEAN		7	6	6	5	5	5	7	11	16	14	9	4	5	4		4	6	6	5	7	9	9	8	8			

TABLE 3-57 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, SEPTEMBER 1962

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SAT	3	3	2	3	3	3	3	4	4	4	3	3	2	2		3	2	3	4	5	5	4	4	4	3.2	23	5
2	SUN	4	3	3	3	2	1	2	2	2	1	1	1	1	1		1	2	2	3	2	2	2	2	1	1.8	23	4
3	MON	2	2	2	1	1	1	1	2	2	2	3	3	3	2		3	3	3	3	3	3	2	3	2	2.1	23	4
4	TUE	1	1	1	1	1	1	1	2	2	2	2	2				5	5	5	5	5	6	2	2	2	2.6	21	6
5	WED	2	2	2	2	1	1	1	1	2	3	3	3	4	3									2	1	2.0	16	4
6	THU	1	1	1	1	1	2	2	2	1	1	1	1	1	1		2	2	2	3	5	5	6	6	7	2.5	23	7
7	FRI	6	5	5	5	5	4	4	4	6	6	3	3	3	3		3	3	3	5	6	7	7	7	6	4.8	23	7
8	SAT	7	6	6	5	6	5	6	8	10	8	5	2	2	1		3	3	3	4	4	6	5	4	3	4.8	23	10
9	SUN	2	2	2	3	4	4	4	4	2	1	2	2	1	2		2	2	3	2	2	3	2	1	1	2.4	23	5
10	MON	1	1	1	1	1	2	2	1	1	1	1	0				3	3	3	3	3	3	3	3	3	1.9	21	3
11	TUE	1	1	1	1	1	1	2	3	2	1	1	2				3	3	3	4	4	4	4	4	4	2.3	21	5
12	WED	3	3	3	3	3	4	4	5	4	2	1	1	1	1		3	3	3	6	8	8	7	7	6	3.8	23	9
13	THU	7	9	8	6	7	6	7	11	30	10	4	4	4	3		4	4	4	5	6	6	5	5	5	6.9	23	37
14	FRI	5	4	4	4	3	4	4	6	6	5	4	7	5	4		4	4	4	8	9	6	7	7	7	5.3	23	11
15	SAT	5	5	3	2	2	3	3	3	2	2	2	1	1	1		2	2	3	4	5	5	5	5	4	3.1	23	6
16	SUN	3	4	3	3	4	4	4	4	3	3	2	2	2	2		4	4	5	6	5	4	3	3	3	3.4	23	6
17	MON	2	2	1	1	1	2	3	4	3	3	3	3	3			4	5	5	5	5	5	5	4	3	3.3	22	6
18	TUE	3	2	2	2	2	3	3	4	2	1	1	2	2			0	1	1	2	2	2	2	3	3	2.0	22	4
19	WED	2	2	2	2	2	3	4	6			4	3	3	2		4	5	5	4	4	5	5	5	2	3.4	21	7
20	THU	2	2	2	1	2	2	2	3	2	1	1	2	1	2		2	2	3	3	3	3	3	3	3	2.2	23	3
21	FRI	3	3	2	1	1	1	1	2	1	0	0	0	0	1		3	4	5	7	7	5	2	2	2	2.3	23	8
22	SAT	2	2	2	2	2	3	2	3	8	4	3	2	1	2		1	1	3	3	3	3	3	3	2	2.5	23	9
23	SUN	2	1	2	1	2	1	1	2	2	2	2	2	2	2		3	3	3	4	5	4	4	4	4	2.6	23	5
24	MON	4	3	3	2	3	3	3	5	6	4	3	4		2		4	4	5	6	6	5	4	3	2	3.8	22	7
25	TUE	2	3	3	2	3	3	3	3	3	3	3	2					4	4	4	4	3	3	3	3	3.0	20	5
26	WED	2	2	2	2	2	2	2	2	2	2	3	3	3	3		5	5	5	4	3	3	3	3	2	2.8	23	5
27	THU	2	2	2	2	2	2	2	2	2	3	2	2	1	2		5	5	5	3	3	3	2	2	2	2.5	23	5
28	FRI	2	2	1	1	2	2	3	3	3	2	2	2	2	3		5	4	3	3	3	3	3	3	2	2.6	23	5
29	SAT	2	2	2	2	2	2	2	2	3	3	2	2	2	2		2	2	4	4	4	4	5	5	6	2.9	23	6
30	SUN	6	5	5	5	5	4	3	5	8	8	6	3	2	2		2	3	4	6	7	9	10	9	8	5.3	23	12
MONTHLY MEAN		3	3	3	2	2	3	3	4	4	3	2	2	2	2		3	3	4	4	4	4	4	4	3	3.1		
NO. OF DAYS		30	30	30	30	30	30	30	30	29	29	30	30	25	24		28	29	29	29	29	29	29	30	30		669	
MAX.HRLY MEAN		7	9	8	6	7	6	7	11	30	10	6	7	5	4		5	5	5	8	9	9	10	9	8			

TABLE 3-58 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, OCTOBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON	6	6	5	5	4	3	4	7	9	15		7	3	2		5	5	7	7	4	5	5	5	5	5.7	22	16
2	TUE	5	5	5	4	4	4	4	6	9	7	4	1				3	4	6	8	8	6	6	6	6	5.2	21	11
3	WED	7	7	6	6	5	5	5	6	7	6	3	2	3	3		5	7	6	6	6	5	5	3	3	5.1	23	8
4	THU	3	3	2	2	3	3	3	3				3	2	4		4	4	4	4	4	3	3	3	2	3.1	20	4
5	FRI	3	3	2	2	2	2	2	2	2	2	2	2	2	2		5	6	8	10	9	9	8	7	6	4.3	23	10
6	SAT	6	5	5	4	4	4	4	4	4	4	3	3	3	3		3	4	5	7	7	7	6	6	6	4.6	23	7
7	SUN	5	3	2	2	2	2	2	3	3	2	2	2	2	2		2	3	5	7	8	8	7	8	6	3.8	23	8
8	MON	6	6	5	5	5	4	4	3	3	4	4	4	4	4		6	6	5	6	5	6	6	6	5	4.8	23	8
9	TUE	5	5	4	4	4	4	4	5		4	3	2	2				5	4	4	4	4	4	3	2	3.7	20	6
10	WED	2	1	1	2	2	2	3	3	4	3	5	2	2	2		4	5	7	8	7	7	7	6	6	4.0	23	19
11	THU	5	5	5	4	4	3	3	5	8	8	6	6	4	3		6	7	7	7	7	7	6	6	6	5.5	23	9
12	FRI	5	4	3	4	4	4	4	5	8	9						5	7	8	8	8	6	6	6	5	5.7	19	10
13	SAT	5	5	3	2	2	2	3	2	2	2	2	2	2	2		2	4	6	7	8	8	8	7	7	4.0	23	8
14	SUN	6	5	5	5	5	4	4	4	5	7	6	4	3	2		3	3	4	4	4	5	5	4	4	4.5	23	7
15	MON	2	3	3	3	2	4	4	5	6		4	4	3	2		4	6	7	7	6	5	4	3	3	4.1	22	7
16	TUE	2	2	3	3	4	5	5	5	4	4	3	3	4	3		5	5	5	4	6	3	3	5	4	3.8	23	6
17	WED	5	5	4	3	3	4	4	5	3	2	2	2	2	2		4	5	5	5	6	5	4	4	4	3.7	23	6
18	THU	3	3	2	2	2	3	3	4	4	3	2	1	1	1		3	3	5	6	6	5	5	5	5	3.4	23	6
19	FRI	5	5	4	4	4	3	4	6	5	4	3	2	2	2		2	3	5	6	7	6	6	6	5	4.2	23	7
20	SAT	5	5	4	4	3	3	3	4	4	4	4	3	3	2		2	2	5	6	6	6	5	5	5	4.0	23	6
21	SUN	4	4	3	3	2	2	3	3	3	3	3	4	3			2	1	1	2	2	2	2	1	1	2.5	22	4
22	MON	1	1	1	1	1	1	1	1	2	3	2	2	2	2		4	5	4	5	5	5	5			2.6	21	6
23	TUE				4	2	3	3	3	3	4	4	3	2	2		3	3	3	3	2	2	2	2	1	2.7	20	4
24	WED	1	1	1	1	1	2	2	3			2	2	2	2		2	2	2	2	2	2	2	2	1	1.7	21	3
25	THU	1	1	1	1	1	1	1	1	1	2	2	1	1	2		3	3	3	3	3	3	3	2	2	1.8	23	4
26	FRI	2	2	3	4	1	2	2	2	2	1	2	2	2	2		2	3	3	3	3	3	3	2	2	2.3	23	4
27	SAT	2	2	2	2	3	3	4	5	5	4	2	3	3	3		3	3	3	3	3	3	3	3	3	3.0	23	5
28	SUN	3	1	1	1	0	0	0	0	0	0	0	1	1	1			7	6	7	6	6	5	5	5	2.5	22	7
29	MON	5	4	3	3	2	1	2	2	2	1	3	3	2	2			4	5	6	7	7	4	4	3	3.4	22	7
30	TUE	3	3	3	3	3	3	3	4	5	4	5	5	5			5	5	6	6	7	7	4	4	4	4.4	22	7
31	WED																											
MONTHLY MEAN		4	4	3	3	3	3	3	4	4	4	3	3	2	2		4	4	5	6	6	5	5	4	4	3.8		
NO. OF DAYS		29	29	29	30	30	30	30	30	27	27	27	29	28	25		27	30	30	30	30	30	30	29	29		665	
MAX.HRLY MEAN		7	7	6	6	5	5	5	7	9	15	6	7	5	4		6	7	8	10	9	9	8	8	7			

TABLE 3-59 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, NOVEMBER 1962

DAY OF		A M												P M												DAILY MEAN	NO OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU	2	2	2	2	2	2	3	3	4	4	4	2	2	2		3	3	4	4	4	4	4	4	4	3.1	23	4
2	FRI	3	3	3	4	4	4	4	4	4	5	4	4	4	3		4	4	5	5	5	5	5	5	5	4.1	23	5
3	SAT	4	4	4	4	4	4	3	4	3	3	3	3	3	3		3	3	3	3	3	3	2	2	3	3.3	23	4
4	SUN	3	3	3	3	3	3	3	3	3	4	4	4	3	3		3	4	4	5	5	5	5	4	4	3.6	23	5
5	MON	4	4	3	3	3	2	2	4	3	3	3	3	3	3		4	4	4	5	5	6	6	6	4	3.7	23	6
6	TUE	3	3	3	3	2	2	3	3	3	3	2	2	2	2			4	5	5	5	6	6	6	8	3.6	22	9
7	WED	9	6	4	4	4	3	4	4	5	7						4	7	6	6	6	5	6	5	5	5.3	19	11
8	THU	5	5	4	4	4	4	4	4	5	8	10	11	13	12		6	7	7	7	7	7	7	7	6	6.7	23	14
9	FRI	5	4	4	4	3	3	2	2	3	3	3	4	5	5		4	4	4	4	3	2	2	2	2	3.4	23	6
10	SAT	2	2	2	1	1	1	2	2	1	1	1	1	1	1		1	2	1	1	1	2	2	2	1	1.3	23	2
11	SUN	2	2	1	1	1	1	1	1	1	1	1	1	1			2	2	2	2	2	2	2	2	2	1.5	22	3
12	MON	1	1	1	0	0	0	1	1	1	1	1	1	2	4		2	3	3	4	2	2	2	2	2	1.6	23	5
13	TUE	4	4	4	3	2	1	2	2	2	2	2	3	4	4				2	2	2	3	3	3	4	2.7	21	5
14	WED	5	2	2	2	2	2	3	3	3	4						3	3	4	4	4	3	3	3	3	2.9	19	6
15	THU	3	3	3	2	2	2	2	4	7	7	11	6	2	2		3	4	4	5	6	6	4	5	5	4.2	23	11
16	FRI	5	4	3	2	2	4	4	7	11	13	11	7	7				8	8	7	7	7	6	5	5	6.3	21	14
17	SAT	4	4	4	6	5	4	4	4	4	5	5	6	6	7		4	4	4	4	5	5	5	5	5	4.7	23	7
18	SUN	5	5	5	5	5	4	4	4	4	4	4	3	3	3		3	3	3	2	4	4	4	4	5	3.8	23	5
19	MON	3	2	2	2	2	2	2	2	2	2			1	2			5	5	6	6	6	4	4	3	3.2	20	7
20	TUE	3	3	3	3	2	2	2	4	3	3	3	3	3	3				4	4	3	3	3	3	2	3.0	21	5
21	WED	2	2	2	2	2	3	3	4	1	1			2	2		2	3	2	3	2	2	2	2	2	2.2	21	4
22	THU	1	1	1	1	1	1	0	1	0	0	1	1	1	1		0	0	0	0	0	0	0	0	0	0.4	23	1
23	FRI																											
24	SAT																											
25	SUN																											
26	MON																											
27	TUE																											
28	WED																											
29	THU																											
30	FRI																											
MONTHLY MEAN		4	3	3	3	3	2	3	3	3	4	4	4	3	3		3	4	4	4	4	4	4	4	4	3.4		
NO. OF DAYS		22	22	22	22	22	22	22	22	22	22	18	18	20	18		17	20	22	22	22	22	22	22	22		485	
MAX.HRLY MEAN		9	6	5	6	5	4	4	7	11	13	11	11	13	12		6	8	8	7	7	7	7	7	8			

TABLE 3-60 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, DECEMBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SAT																											
2	SUN																											
3	MON																											
4	TUE																											
5	WED																											
6	THU																											
7	FRI																											
8	SAT																											
9	SUN																											
10	MON																											
11	TUE																											
12	WED																											
13	THU																											
14	FRI																											
15	SAT	4	4	4	4	4	4	4	4	4	4	3	3	3	3		3	4	4	4	4	4	4	4	4	3.8	23	5
16	SUN	4	4	3	4	4	3	3	4	3	3	3	3	3	3		3	4	4	4	4	4	3	3	3	3.4	23	4
17	MON	3	3	2	2	3	3	3	3	3	3	4	3	3	3		4	5	4	5	5	4	4	2	2	3.3	23	6
18	TUE	1	1	0	0	0	0	0	0	0	0	0	0	0	0											0.1	14	1
19	WED		2	2	2	2	1	1	1	1	2		1	4	4		5	6	5	6	5	5	7	6	5	3.4	21	7
20	THU	6	6	5	4	4	3	3	3	2	3	3	3	3	2		3	3	3	3	3	4	3	3	3	3.3	23	7
21	FRI	3	3	3	2	2	2	3	3	3	4	3	3	2	3		3	4	4	4	4	3	3	3	3	3.0	23	4
22	SAT	3	3	3	3	3	3	3	3	3	3	3		6	6		7	6	4	4	4	4	4	4	4	3.9	22	7
23	SUN	4	4	4	3	3	3	3	3	2	2	3	3	5	6		7	8	7	3	3	2	2	2	2	3.7	23	9
24	MON	2	2	2	1	1	1	1	2	2	2	2	2	2	2		3	3	4	4	4	4	4	4	4	2.5	23	4
25	TUE	4	4	4	4	4	4	4	4	4	4	4	4	5	4		4	5	5	6	6	5	5	5	5	4.5	23	6
26	WED	5	5	5	4	4	4	5	5	5	5			9	11			4	3	3	3	3	3	3	3	4.5	20	12
27	THU	3	3	3	3	3	3	3	3	3	2	3	3	4	5		5	5	5	4	4	4	3	3	4	3.5	23	5
28	FRI	4	4	4	4	3	2	3	3	3	3	2	4	3	3		4	5	5	5	5	5	5	4	4	3.8	23	6
29	SAT	4	4	3	4	3	3	3	3	3	3	3	3	5	5		4	5	5	4	5	5	4	3	3	3.8	23	5
30	SUN	2	1	1	1	1	1	2	2	2	2	2	2	2	2					4	4	5	5	4	3	2.4	20	5
31	MON	2	2	2	2	2	2	2	3	3	3	3	3	3	3		3	3	3	3	3	3	3	3	3	2.6	23	3
MONTHLY MEAN		3	3	3	3	3	3	3	3	3	3			4	4					4	4	4	4	3	3	3.3		
NO. OF DAYS		16	17	17	17	17	17	17	17	17	17	15	15	17	17		14	15	15	16	16	16	16	16	16		373	
MAX.HRLY MEAN		6	6	5	4	4	4	5	5	5	5	4	4	9	11		7	8	7	6	6	5	7	6	5			

TABLE 3-61 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, JANUARY 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	TUE	3	2	2	2	2	2	2	3	3	2	2	2	2	2			2	3	2	3	2	3	3	2	2.3	22	3
2	WED	2	2	2	2	2	2	2	2	2	2	4	4	4	4			5	5	5	5	5	4	4	4	3.3	22	5
3	THU	3	3	3	3	3	3	3	3	2	2	3	3	4	5		5	6	6	6	5	6	5	5	5	4.0	23	6
4	FRI	4	4	4	4	4	3	4	4	4	4	4	4	4	4		5	6	6	6	5	5	4	4	3	4.3	23	6
5	SAT	3	3	3	3	2	2	3	1	1	1	0	0	8	15		7	9	7	6	5	4	3	2	2	4.0	23	19
6	SUN																											
7	MON	8	6	6	6	5	5	5	5	5	8	11	16	17	11		7	8	9	10	7	7	7	7	7	7.9	23	19
8	TUE	6	7	8	8	8	8	7	7	7	8	10	9	10	10											8.0	14	11
9	WED																											
10	THU	4	4	4	3	3	3	3	2	2	5				7		5	6	6	5	5	4	4	3	3	4.0	20	7
11	FRI	3	3	2	2	1	1	1	1	1	2	2	3	3	2		4	5	9	10	6	5	6	6	6	3.6	23	11
12	SAT	5	5	5	4	4	4	4	3	3	3	3	3				6	6	6	6	5	6	6	5	5	4.6	21	6
13	SUN	5	4	4	5	5	5	5	5	5	4	2	2	1	1		2	2	3	3	3	2	2	2	1	3.1	23	5
14	MON	1	1	1	1	1	1	1	1	1	1		1	0	0				2	2	2	2	2	2	2	1.3	20	3
15	TUE	2	2	2	2	1	1	2	1	2	3	5	4	2					5	5	5	4	4	4	4	2.9	20	5
16	WED	4	4	4	3	3	3	4	4	4	4	5		6	6		3	3	6	5	4	4	3	3	3	4.0	22	6
17	THU	2	2	2	2	2	2	1	1	1	3	5	5	5	5		3	3	7	7	6	5	5	4	4	3.5	23	8
18	FRI	4	3	3	3	2	2	2	2	2	2	3		4	4		6	5	5	4	4	3	3	3	3	3.2	22	6
19	SAT																											
20	SUN																											
21	MON	2	2	2	2	2	1	1	2	1	1	2	2	2	2				3	3	3	3	3	3	3	2.1	21	3
22	TUE	2	2	3	3	3	3	2	3	3	3	3	3	3	2					6	6	6	6	6	6	3.6	20	6
23	WED	5	5	5	5	6	6	5	5	5				4	4		4	4	4	3	3	2	2	2	2	4.0	20	6
24	THU	2	1	1	1	1	1	1	2	2	2	2	2	3	2			2	2	2	2	2	3	3	3	1.8	22	3
25	FRI	2	2	2	2	2	2	1	2	1									3	3	3	3	3	2	2	2.2	16	3
26	SAT	2	2	1	1	1	1	0	1	1	2	2	2	1	2			2	3	3	3	2	2	2	2	1.7	22	3
27	SUN	2	2	2	2	2	2	2	1	1	1	2	2	2	2			2	2	1	2	2	2	2	2	1.9	22	3
28	MON																											
29	TUE																											
30	WED	3	3	3	2	2	1	2	2	3	2	2	2	3	4		4	5	6	6	5	4	4	4	4	3.3	23	7
31	THU	4	4	4	3	3	3	3	3	3	3		2	3	2		3	3	4	4	4	4	4	4	4	3.3	22	4
MONTHLY MEAN		3	3	3	3	3	3	3	3	3	3	4	4	4	4			4	5	5	4	4	4	4	3	3.5		
NO. OF DAYS		25	25	25	25	25	25	25	25	25	23	20	20	22	22		14	19	23	24	24	24	24	24	24		532	
MAX.HRLY MEAN		8	7	8	8	8	8	7	7	7	8	11	16	17	15		7	9	9	10	7	7	7	7	7			

TABLE 3-62 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, FEBRUARY 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI	3	4	4				3	3	2	2	3	3	2	2		3	3	3	2	3	3	3	3	2	2.9	20	4
2	SAT	2			3	3	2	2	2	2	3	3	3	3	3		2	2	2	2	2	2	2	2	2	2.3	21	4
3	SUN	2	2	2	1	1	1	1	1	1	1	1	1	1	1		1	1	1	2	2	2	2	2	1	1.3	23	2
4	MON	2	2	2	2	2	2	2	2	2		2	2	2	1		2	3	4	4	4	3	3	3	3	2.4	22	4
5	TUE	2	3	3	3	2	2	2	2	2	3	4	4	5	5			9	8	7	6	5	4	3	3	3.9	22	8
6	WED	3	3	3	2								12	11	12		9	7	13	13	10	10	9	9	10	8.5	16	13
7	THU	9	8	6	3	2	1	2	2	2	2	3	3	5	7		6	6	7	6	5	4	4	3	2	4.3	23	10
8	FRI	2	2	1	1	1	1	1	1	1	1	1	1	2	2		3	3	4	3	3	3	3	3	3	1.9	23	4
9	SAT	3	3	2	2	1	1	1	1	2	2	3	3	2					4	4	3	3	2	4	3	2.4	20	4
10	SUN	3	3	3	3	2	2	2	2	2	2	2	2	2	2		4	4	3	3	4	4	4	3	3	2.8	23	4
11	MON	2	2	2	2	2	2	2	2	2	3	4	4	4	4		7	7	7	6	6	5	5	4	4	3.8	23	7
12	TUE	3	3	3	3	3	3	3	3	3	3	3	3	3	3			7	8	7	7	5	5	5	4	4.1	22	9
13	WED	4	4	3	3	3	3	3	4	3	4	4						4	5	5	5	4	4	5	5	4.0	19	5
14	THU	5	5	5	4	4	4	4	4	4	4	4	4				3	5	5	4	3	3	3	3	3	3.9	21	5
15	FRI	3	2	2	2	2	2	2	2	2	2	2	3	3	2		3	4	4	4	4	4	3	3	3	2.7	23	4
16	SAT	3	3	3	3	3	3	3	3	3	2	3	3	3	4		3	3	3	4	4	4	5	4	4	3.3	23	5
17	SUN	4	3	3	3	3	3	3	3	3	3	3	3	2	3		3	3	5	4	4	4	3	3	2	3.2	23	6
18	MON	2	2		3	3	4	4	4	5	9	12	9	6	5		5	5	5	5	5	5	5	4	4	5.1	22	13
19	TUE	5	4	3	3	3	3	4	4	4	4	4	3	3	3			5	5	5	5	5	4	4	4	4.0	22	6
20	WED	4	4	3	4	4	4	4	4	4	5	4	4	4	3		5	5	5	5	6	5	4	4	3	4.2	23	7
21	THU	4	4	3	3	1	2	3	3	3	3	3	3	3	3		4	4	4	4	3	3	3	3	3	3.1	23	4
22	FRI	3	3	3	2	2	2	2	3	3	3	3	3	3	3		2	2	2	2	5	5	4	4	4	2.8	23	5
23	SAT	4	4	4	4	4	4	4	4	3	3	4			3		3	3	3	4	4	4	4	3	3	3.6	21	6
24	SUN	3	3	3	3	3	3	2	3	2	2	2	2	2	4		3	3	4	4	4	3	3	3	2	2.9	23	5
25	MON	3	3	3	3	3	3	4	4	4	4	4	3	4	4		5	6	6	5	5	6	6			4.1	21	7
26	TUE																											
27	WED	4	4	4	4	4	4	5	5	5	4	5	6	6	5											4.6	14	6
28	THU																											
MONTHLY MEAN		3	3	3	3	3	3	3	3	3	3	3	4	3	4		4	4	5	5	4	4	4	4	3	3.5		
NO. OF DAYS		26	25	24	25	24	24	25	25	25	24	25	24	23	23		20	24	25	25	25	25	25	24	24		559	
MAX. HRLY MEAN		9	8	6	4	4	4	5	5	5	9	12	12	11	12		9	9	13	13	10	10	9	9	10			

TABLE 3-63 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, MARCH 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI	4	4	4	4	4	3	4	4	4	3	3	3	2	2		3	4	4	4	4	3	4	3	3.	3.4	23	5
2	SAT	3	3	2	2	2	2	3	3	2	2	2	2	2	2		3	4	4	5	5	5	5	5	5	3.2	23	6
3	SUN																											
4	MON																											
5	TUE	8	8	8	8	7	7	6	6	5								6	6	5	4	3	3	3	3	5.6	17	8
6	WED	3	3	3	3	2	3	3	3	3	4	3	3	2	1		3	4	4	4	4	4	3	3	3	3.1	23	5
7	THU	2	2	2	2	2	2	2	3	3	2	2	2	2	1		3	3	3	3	3	4	4	4	3	2.6	23	4
8	FRI	3	4	3	2	2	2	2	2	2	4	4	3	3	3		3	4	5	6	6	6	5	6	5	3.7	23	6
9	SAT	5	5	5	5	5	3	3	3	3	3	3	3	3			3	4	6	6	6	6	5	5	5	4.2	22	6
10	SUN	5	5	5	4	3	3	3	3	2	2	2	2	2	2		2	3	3	4	4	4	4	4	4	3.3	23	5
11	MON	4	4	3	3	3	3	3	3	3	3	3	4	5	4		5	5	5	5	5	5	5	4	5	4.0	23	6
12	TUE	5	5	5	4	4	4	4	4	5	6	6	8	9	11			10	10	7	7	7	5	5	4	6.1	22	12
13	WED	4	4	4	4	4	4	4	5	6	6	7		8	9		12	14	12	10	10	7	5	6	4	6.6	22	15
14	THU	3	3	3	3	3	3	3	3	3	3	3	4	4	3		4	4	4	4	4	4	4	4	3	3.4	23	5
15	FRI	3	3	3	3	3	3	3	3	3	3	4	3	3	4		5	5	5	5	4	4	4	3	3	3.5	23	6
16	SAT	3	3	3	3	3	3	3	3	3	3	3	3	3	3		4	4	3	3	4	3	3	3	3	3.2	23	5
17	SUN	3	3	2	2	2	2	2	2	2	2	2	3		4		4	4	3	3	3	3	3	3	2	2.8	22	4
18	MON	2	2	1	1	1	1	1	1	1							5	5	6	5	6	6	6	5	5	3.3	18	6
19	TUE	5	4	3	3	3	4	5	5	5	5	5	4	4	4			5	5	5	4	4	4	4	4	4.1	22	5
20	WED	4	3	3	3	3	3	3	4	2	2	1					4	3	3	3	3	3	3	3	3	2.8	20	4
21	THU	2	2	2	2	2	2	2	3	3	2	2					3	3	4	3				3	3	2.5	17	4
22	FRI	3	2	2	2	1	2	3	3	3	3	3	2	3	3		4	4	5	5	5	5	4	4	4	3.2	23	5
23	SAT	4	4	4	3	3	3	3	4	3	3	3	4	3	4		3	4	5	5	6	6	6	6	6	4.1	23	6
24	SUN	5	6	8	9	6	6	5	6	7	8	5	5	4	3		3	3	5	7	6	6				5.7	20	10
25	MON		6	6	6	6	6	6	8	9	9	8	8	7	4		5	5	5	5	5	5	4	4	3	5.9	22	10
26	TUE	3	3	3	2	2	3	3	3	3	4	4	3	2	2			5	5	5	4	4	5	5	4	3.5	22	5
27	WED	3	3	3	2	2	3	4	4	5	4	3	3	2	2		3	3	3	2	6	6	6	6	5	3.5	23	6
28	THU	5	5	4	4	3	4	4	4	6	7	5	4	3	2			10	7	8	8	8	7	6		5.3	21	10
29	FRI		6	5	5		3	3	3	2	1	1	2	2	2			4	6	5	5	5	4	4	4	3.6	20	7
30	SAT	3	4	3	3	3	3	3	4	4	4	4	5	3	3		3	4				4	7	5	3	3.9	20	9
31	SUN	3	3	2	1					2	1	1	1	1	1			2	3	3	5	4	3	2	2	2.2	18	6
MONTHLY MEAN		4	4	4	3	3	3	3	4	4	4	3	3	3	3		4	5	5	5	5	5	4	4	4	3.9		
NO. OF DAYS		27	29	29	29	27	28	28	28	29	27	27	24	24	24		22	29	28	28	27	28	27	28	27		624	
MAX.HRLY MEAN		8	8	8	9	7	7	6	8	9	9	8	8	9	11		12	14	12	10	10	8	7	6	6			

TABLE 3-64 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, APRIL 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON	2	2							3	3	3	3	4	4		3	4	4	5	4	4	4	3	3	3.5	17	5
2	TUE	4	4	3	4	3	3	3	3	4	7	7	8	8	5											4.7	14	9
3	WED																											
4	THU	5	3	2	4	3	3	3	5	5	4	3	3	3	2			6	5	4	4	5		4	4	3.7	21	7
5	FRI	3	3	2	2	2	2	3	4	3	3	3	3	2	2		3	4	4	4	5	5	5	4	5	3.2	23	5
6	SAT	4	4	4	5	4	5	5	5	3	3	2	2				4	4	4	4	4	6	5	4	4	4.1	21	6
7	SUN	3	3	3	3	3	3	4	4	4	4	4	5	4	5		3	2	3	3	3	2	0	2	3	3.1	23	6
8	MON	3	3	3	2	2	2	4	4	4	4	5	6	6	6			5	6	7	6	5	6	6	5	4.5	22	7
9	TUE	4	3	3	3	3	3	4	4	4	5	4	4	4	5			5	5	5	5	5	3	3	3	4.0	22	6
10	WED	2	2	2	1	1	2	2	2	2	2	2	2	2	2				7	5	5	5	5	5	4	3.0	21	8
11	THU	4	4	3	3	3	3	4	4	4	3	3	3	3	2		2	3	3	3	3	3	3	3	3	3.0	23	5
12	FRI	3	2	2	2	2	2	3	3	3	2	2	3	3	3		2	3	3	4	4	4	3	3	3	2.8	23	5
13	SAT	3	3	3	2	2	3	3	3	3	2	2	2	3	3		3	3	3	4	4	4	4	3	3	3.0	23	5
14	SUN	3	3	3	2	2	2	2	3	2	2	1	1					2	1	1	2	2	2	2	2	2.0	20	4
15	MON	1	1	1	1	0	0	1	2	2	2	2	1	1					3	3	5	5	5	5	5	2.2	20	5
16	TUE	4	4	4	4	4						4	3	3	2			3	5	4	5	4	4	4	4	3.8	17	6
17	WED	3	2	2	2	2	3	4	6	6	4	5	6	6	6		8	7	7	6	6	6	5	5	4	4.8	23	9
18	THU	4	4	5	4	4	4	4	4	6	7	10	4	2	3				9	8	10	9	9	9	9	6.1	21	12
19	FRI	8	9	10	8	7	6	5	5	4	4	4	3	3	3		3	5	7	7	6	4	4	4	4	5.3	23	12
20	SAT	3	2	2	2	2	1	3	3	3	2	3	3	2	2		3	3	2	3	4	6	6	6	6	3.0	23	7
21	SUN	5	5	5	5	3	3	4	4	3	2	1	2	2	2			2	3	5	7	7	2	2	3	3.6	22	9
22	MON	3	2	2	1	1	1	2	3	3	2						4	4	5	5	5	6	6	6	4	3.5	19	7
23	TUE	3	2	2	1	1	1	2	3	2	3	3	5	5	4			3	3	3	2	2	2	2	2	2.4	22	5
24	WED	2	1	1	1	1	2	2	3	3	3	3	2	2	2		3	4	4	4	4	4	4	3	3	2.6	23	4
25	THU	3	2	2	2	1	2	2	2	3	3	2	2	2	1		2	3	4	3	5	5	4	4	3	2.6	23	5
26	FRI																											
27	SAT							2	2	1	1	1	1	1	1		2	2	3	3	5	5	5	4	4	2.6	17	6
28	SUN	4	4	3	2	2	2	1	1	1	1	1	1	2	2		2	2	2	3	4	5	2	2	2	2.2	23	6
29	MON	1	2	2	2	2	3	3	4	3	3	3	3	2	3		2	3	2	2	1	2	1	1	1	2.2	23	4
30	TUE	0	1	1	1	1	1	2	4	4	4	4	3	2	2			4	4	4	4	4	4	4	4	2.7	22	5
MONTHLY MEAN		3	3	3	3	2	2	3	3	3	3	3	3	3	3		3	4	4	4	5	5	4	4	4	3.3		
NO. OF DAYS		27	27	26	26	26	25	26	26	27	27	27	27	25	24		16	24	27	27	27	27	26	27	27		594	
MAX.HRLY MEAN		8	9	10	8	7	6	5	6	6	7	10	8	8	6		8	7	9	8	10	9	9	9	9			

TABLE 3-65 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, MAY 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	WED					0	1	2	1	1	1	1	1	1	1				2	1	2	2	2	2	2	1.4	17	2
2	THU	1	1	1	1	1	2	2	2	3	2	2	2	1	1		2	2	2	3	4	6	4	3	2	2.1	23	4
3	FRI	2	2	2	1	1	1												5	4	4	6	5	6	5	3.3	13	8
4	SAT	6	5	7	5	4	3	3	6	9	8	7	3	1				2	1	3	4	2	3	3	2	4.1	21	10
5	SUN	2	3	1	1	2	1	1	1	1	1	2	2	1	0											1.4	14	3
6	MON																											
7	TUE																											
8	WED	3	3	4	3	2	3	3	3	3	2	3	4					7	6	6	6	6	6	6	6	4.2	20	7
9	THU	5	5	4	4	4	4	5	7	8	7	5	3	3	2		4	6	5	5	7	7	8	9	7	5.2	23	9
10	FRI	4	4	3	3	4	4	6	9	10	8	3	4	2	2		4	4	4	4	4	4	4	5	3	4.5	23	12
11	SAT	2	2	1	2	3	3	2	2	2	2	2	2	2	2		1	1	2	2	3	3	3	3	2	2.0	23	3
12	SUN	2	2	2	1	1	1	1	1	1	1	1	1	1	1		1	1	2	3	3	4	4	5	4	1.9	23	5
13	MON	3	3	3	2	2	3	3	4	3	2	1	0	0	0			3	2	2	2	2	2	2	1	2.0	22	5
14	TUE																											
15	WED		1	1	1	1	2	3	3	2	1	1	1	1	1		3	3	3	3	4	5	6	5	5	2.5	22	6
16	THU	5	5	5	3	3	3	5	6	4	3	4	3	3			1	1	4	3	3					3.5	18	8
17	FRI																											
18	SAT		0	1	1	2	2	3	3	3	1	1	2	2	2		2	2	2	3	5	6	5	5	5	2.6	22	6
19	SUN	4	4	4	3	3	3	3	4	5	4						2	2	3							3.3	13	5
20	MON	3	3	2	3	2	3	3	4	4	3	3	2				4	4	4	4					4	3.2	17	5
21	TUE	4	4	5	5	4	4	4	3	4	4	4	3	2				3	3	3	3	4	5	4	2	3.6	21	5
22	WED	1	1	0	1	1	2	3	5	7	2	0	0	0	1							2	2	2	2	1.8	18	9
23	THU																											
24	FRI																											
25	SAT		4	4	4	4	4	4	4	3	3	2	2	2	2		2	2	2	2	2	2	1	1	1	2.5	22	5
26	SUN	1	1	1	1	1	1	1	2	1	2	2	2	2	2		2	3	3	4	3	3	2	1	2	1.8	23	4
27	MON	1	1	1	1	1	2	3	2	1	1	1	1	0	0		3	2	3	3	3	3	2	2	1	1.6	23	3
28	TUE	1	1	1	1	0	1	2	2	2	1	1	1	0				2	2	2	2					1.3	17	3
29	WED		1	0	0	1	1	1	1	1	1	1	1	1	3		4	4	3	4	3	3	3	3	2	1.9	22	5
30	THU	3	3	2	1	2	2	2	2	1	1	1	1	1	1		1	1	2	2	4	6	6	5	4	2.3	23	6
31	FRI	4	4	2	1	2	2	3	3	1	1									3	4	5	5	6	5	3.2	16	6
MONTHLY MEAN		3	2	2	2	2	2	3	3	3	3	2	2	1	1			3	3	3	3	4	4	4	3	2.7		
NO. OF DAYS		20	24	24	24	25	25	24	24	24	24	22	22	20	16		15	20	22	22	21	20	20	20	21		499	
MAX.HRLY MEAN		6	5	7	5	4	4	6	9	10	8	7	4	3	3		4	7	6	6	7	7	8	9	7			

TABLE 3-66 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, JUNE 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SAT	5	5		5	4	4	4	4	3	2	1	1	1	1		2	2	2	3	3	3	3	3	2	2.8	22	7
2	SUN	3	3		2	2	2	3	3	2	2	3	3	4	4		4	4	4	4	3	2	2	3	2	2.9	22	4
3	MON	2	2	3	2	3	2	2	2	2	1	1	1	1	2		2	2	2	2	2	3	2	2	2	2.0	23	4
4	TUE	2	2	1	1	1	2	1	1	2	2	2	2	1	1											1.6	14	3
5	WED	3	2	3	2	2	4	4	4	3	2	2	3	2	2		2	2	3	3	4	4	4	4	3	2.8	23	5
6	THU	3	2	2	2	2	1	2	5	8	2	0	0	0	0							5	4	3	4	2.5	18	9
7	FRI	3	3	3	3	3	4	5	5					2	2		6	7	9	8	8	4	2	2	1	4.2	19	12
8	SAT																											
9	SUN																											
10	MON	5	4	3	3	3	3	4	7	7	4	2	2	2			4	4	3	4	4	4	2	2	3	3.5	22	9
11	TUE	2	1	1	2	1	3	4	4	3	3	3	3	3				4	3	4	3	5	5	4	3	3.0	21	6
12	WED	2	2	1	1	2	2	3	3	3	2	2	2	2	2		3	3	2	2	2	2	3	2	3	2.2	23	4
13	THU	2	1	1	1	1	1	2	1	1	2	2	2	2	2		3	4	3	3	4	6	7	6	5	2.7	23	7
14	FRI	5	5	4	4	5	5	6	6	6	5						5	4	4	5	5	7	7	7	6	5.4	19	8
15	SAT	4	4	3	3	2	3	3	3	2	2	2	2	3	3		3	3	3	4	5	6	6	5	6	3.4	23	6
16	SUN	5	4	4	4	5	5	6	7	8		5	4	3	3		4	4	4	5	5	9	11	9	11	5.6	22	12
17	MON	11	9	7	5	5	6	9	21	10	5	4	3	4	3		4	3	3	3	3	6	8	8	7	6.3	23	24
18	TUE	8	6	7	7	4	5	6	8	10	3	2	1	2			3	2	2	3	4	4	4	4	4	4.4	22	12
19	WED	3	3	2	4	4	4	5	8	9	6	5	3	2	2		2	3	3	1	2	2	2	3	2	3.4	23	10
20	THU	2	2	1	1	2	2	3	3	4	4	3	3	2	2		2	3	5	7	5	4	3	3	4	3.0	23	7
21	FRI	3	2	2	2	2	2	3	3	3	3	2	2	1	2		2	3	3	3	4	4	5	4	4	2.8	23	5
22	SAT	5	4	4	4	3	3	4	4	3	3	3	2	2	2		2	2	3	3	4	5	5	5	5	3.5	23	6
23	SUN	5	5	4	4	4	4	3	3	2	2	2	2	2	2			0	0	0	0	1	2	2	3	2.4	22	5
24	MON	2	2	1	1	1	1	3	5	4	4	3	2	2	2		3	2	2	2	3	6	11	10	10	3.6	23	12
25	TUE	10	10	8	8	7	6	8	9	9	5	3	2	2	3			3	3	3	5					5.8	18	11
26	WED			5	5	5	5	6	13	11	7	7	7	5	4		5	5	5							6.2	15	17
27	THU			4	4	4	4	6	12	17	8	5	3	2	3		3	3	3	3						5.2	16	21
28	FRI								1	1	1	1	1	4	3		3	3	3	3	4	4	4	3	3	2.5	16	5
29	SAT	3	3	2	3	3	3	3	3	3	3	3	2	3	3		2	3	4	3	4	6	5	4	4	3.2	23	6
30	SUN	5	5	5	5	5	4	3	4	3	4	3	3	2	2			2	2	3	5	6	6	6	6	3.9	22	7
MONTHLY MEAN		4	4	3	3	3	3	4	5	5	3	3	2	2	2		3	3	3	3	4	4	5	4	4	3.6		
NO. OF DAYS		25	25	25	27	27	27	27	28	27	26	26	26	27	24		22	26	26	25	24	24	24	24	24		586	
MAX.HRLY MEAN		11	10	8	8	7	6	9	21	17	8	7	7	5	4		6	7	9	8	8	9	11	10	11			

TABLE 3-67 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, JULY 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON	6	4	3	3	2	3	5	6	3	2	2	2	3	3		2	2	2	3	4	6	6	6	4	3.4	23	7
2	TUE	4	4	3	4	3	4	6	9	6	7	4	3	2	2											4.3	14	10
3	WED										3	3		2	2		2	2	2	2	2	3	3	3	2	2.4	13	3
4	THU	2	2	2	1	1	1	2	2	1	1	2	2	2	2		1	1	1	2	3	5	6	5	5	2.2	23	6
5	FRI	4	4	3	2	2	3	5	4	3	2	2	2	2	2		3	3	3	4	5	6	8	7	7	3.7	23	8
6	SAT	5	4	3	3	3	4	5	5	4	3	3	3	3	3		2	2	3	3	4	6	5	5	4	3.7	23	7
7	SUN	4	4	3	3	3	3	4	4	4	2	2	2	2	1		1	2	2	2	2	3	3	3	2	2.6	23	5
8	MON	2	3	3	1	2	3	4	5	4	3	2	2	2	2		2	3	3	3	3	4	4	4	3	2.8	23	6
9	TUE	2	2	2	2	2	2	3	3	3	2	2	2	2	2		3	3	2	3	4					2.4	19	6
10	WED		6	5	4	4	4	4	5	3	4	3	3	2	2		2	3	3	4	5	6	6	5	5	4.1	22	7
11	THU	5	4	2	2	4	4	4	5	5	5	4	5	5	6		2	3	3	4	6	7	8	6	6	4.5	23	8
12	FRI	5	4	4	6	6	6	7	17	12	5	3	2	2	2		4	6	5	5	4	4	5	5	6	5.3	23	23
13	SAT	7	6	6	5	4	4	4	5	1	1	1		1	2		3	4	3	1	2	2	2	3	1	3.1	22	7
14	SUN	1	1	1	0	1	0	1	1	1	1	1	2	2	2		2	2	3	4	3	3	3	3	3	1.8	23	4
15	MON	2	2	2	2	2	2	4	5	5	3	2	2	2	2		2	2	3	3	5	5	6	6	5	3.2	23	6
16	TUE	5	5	4	4	4	3	5	9	12	5	2	1		2		3	3	3	5	5	8	8	7	6	5.0	22	14
17	WED	6	5	5	5	4	5	6	9	8	6	5	5	3	3		2	3	3	4	4	4	4	4	3	4.6	23	10
18	THU	3	2	2	2	2	2	2	4	3	4	3	3	2	2		3	4	4	4						2.8	18	5
19	FRI											3	2	2	2		3	3	3	4	5	4	4	4	4	3.2	13	5
20	SAT	3	3	2	2	3	3	4	4	4	4	3	3	2	2		2	2	2	2	3	3	3	3	3	2.8	23	5
21	SUN	2	2	1	2	2	1	2	1	1	1	1	1	1	2		1	1	2	2	3	4	4	4	4	2.0	23	5
22	MON	4	4	4	4	4	4	5	5	3	2	2	1	2	3											3.2	14	5
23	TUE		1	1	1	1	1	1	2	1	0	0	0	0	1			3	2	2						1.0	16	3
24	WED		3	2	3	3	3	5	6	4	2	3	2	4	3		3	3	3	3	4	5	5	4	4	3.6	22	6
25	THU	4	3	3	3	3	5	6	7	8	4	2	2	3	3		3	2	2	3	3	5	4	5	5	3.7	23	9
26	FRI	4	3	3	3	4	4	5	9	12	5	3	3	2	3		3	4							6	4.5	17	14
27	SAT	6	5	5	5	3	4	5	5	4	2	2	2	2	3		2	3	3	4	6	6	6	6	5	3.9	23	7
28	SUN	6	4	3	3	2	2	3	3	3	2	2	1	2	2		4	7	6	5	5	6	5	4	5	3.7	23	9
29	MON	4	3	3	2	3	4	5	6	5	4	2	2	3	4		4	4								3.7	16	7
30	TUE		2	2	1	1	3	4	6	5	4	4	2	2	3			3	2	3						2.8	16	7
31	WED		3	2	2	3	3	4				4	4	6	3		2	3	3	3	3	3	3	4	3	3.2	19	7
MONTHLY MEAN		4	3	3	3	3	3	4	5	5	3	2	2	2	2		2	3	3	3	4	5	5	5	4	3.4		
NO. OF DAYS		24	29	29	29	29	29	29	28	28	29	31	29	30	31		27	29	27	27	24	23	23	23	24		631	
MAX.HRLY MEAN		7	6	6	6	6	6	7	17	12	7	5	5	6	6		4	7	6	5	5	8	8	7	7			

TABLE 3-68 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, AUGUST 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU	3	2	3	3	3	2	4	5	5	5	3	3	3	2		4	5	5	4	7	6	8	9	7	4.4	23	10
2	FRI	6	5	3	3	2	3	4	4	3	3	2	2				2	3	4	5	6					3.6	17	7
3	SAT		8	7	6	6	6	7	8	9	11	8	5	5	7		4	4	5	5	6	8	8	7	8	6.6	22	14
4	SUN	7	4	3	1	1	1	2	2	2	2	2	2	2	2		2	2	1	3	4	4	4	5	3	2.6	23	7
5	MON	2	2	2	2	2	3	4	4	3	2	2	2	2	2		3	3	4	5	4	6	5	5	5	3.2	23	6
6	TUE	5	3	2	2	3	4	5	6	6	3	2	2	2	2			4	4	4	5	8	8	7	7	4.2	22	9
7	WED	6	5	3	3	4	5	6	8	8	7	9	7	5	6		4	5	4	5	5	5	5	4	4	5.3	23	10
8	THU	4	3	3	2	3	3	4	5	4	3	2	2	2	1		3	5	5	6	6	6	7	8	8	4.0	23	9
9	FRI	8	7	5	5	5	5	7	15	11	4	4	3	4	3		3	3	3	4	6	6	7	6	7	5.7	23	22
10	SAT	7	3	2	2	2	2	2	2	2	2	2	2	2	2		2	3	4	4	5	7	8	9	7	3.6	23	9
11	SUN																											
12	MON																											
13	TUE																											
14	WED																											
15	THU																											
16	FRI																											
17	SAT																											
18	SUN																											
19	MON	3	3	3	2	3	3	2	3	4										3	2	2	3	2	3	2.7	15	7
20	TUE																											
21	WED																											
22	THU	4	3	2	2	2	2	3	5	7	6	4	3	2	2		3	3	3	5	7	7	6	5	5	4.0	23	8
23	FRI	5	5	3	3	2	3	5	5	5	3	3	2	2	2		2	2	2	3	5	5	5	5	4	3.5	23	6
24	SAT	3	2	2	2	2	3	3	4	4	2	2	2	2	2		2	3	2	1	1	1				2.3	20	5
25	SUN										0	0	0	0	0		1	0	0	0	0	1	0	1	0	0.2	14	2
26	MON																											
27	TUE																											
28	WED	7	8	8	8	9	10	5	6	5	4	4	4	2	3		2	2	2	2	2	1	2	2	2	4.2	23	11
29	THU	1	1	1	1	2	3	4	4	4	3	4	4	5	4		4	5	5	5	6	5	5	5	5	3.8	23	6
30	FRI	4	3	3	2	1	2	3	4	5					4		4	5	4	6	10	11	10	10	8	5.2	19	12
31	SAT	6	6	6	6	6	5	5	6	4	3	3	3	3	3		2	2	3	4	6	6	5	4	4	4.3	23	7
MONTHLY MEAN		5	4	3	3	3	4	4	5	5	4	3	3	3	3		3	3	3	4	5	5	6	5	5	4.0		
NO. OF DAYS		17	18	18	18	18	18	18	18	18	17	17	17	16	17		17	18	18	19	19	18	17	17	17		405	
MAX.HRLY MEAN		8	8	8	8	9	10	7	15	11	11	9	7	5	7		4	5	5	6	10	11	10	10	8			

TABLE 3-69 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, SEPTEMBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	5	5	5	6	5	6	7	7	7	7	2	1	2	2		2	2	2	3	5	6	6	6	6	4.5	23	8
2	MON	6	6	7	7	7	7	8	6	4	2	2	2	2	2		1	1	2	3	4	4	5	5	6	4.3	23	10
3	TUE	6	7	7	8	8	3	4	5	5	7	8	8	8	5		5	6	6	8	8	7	8	9	7	6.6	23	10
4	WED	2	2	2	2	2	4	5	6	5	4	5	5	6	4		3	4	5	6	7	7	8	8	8	4.7	23	9
5	THU	2	3	3	4	4	6	6	7			1	2	2	3		2	3	3	3	4	3	3	4	3	3.4	21	7
6	FRI	3	3	3	3	3	3	4	4	3	3	3	3	2	2		4	4	5	5	6	6	6	5	5	3.7	23	7
7	SAT	5	5	4	3	3	3	3	3	3	4	3	2	2	2		2	3								3.1	16	6
8	SUN																											
9	MON									2	3	2	0	0	0		0	0	0	1	2	2	2	2	1	1.1	15	4
10	TUE	1	1	0	0	0	1	2	2	2	1	1	0	0	0			2	3	3	4	3	3	3	2	1.5	22	4
11	WED	2	2	2	2	1	2	2	1	3	4	5	4	2	1		3	4	3	3	3	2	2	3	2	2.5	23	5
12	THU	1										1	2	2	4		2	4	3	4	5	4	4	3	3	2.9	14	5
13	FRI	3	2	1	1	1	1	2	2	1	1	1	1	1	1		2	3	3	3	3	3	3	3	3	1.9	23	4
14	SAT	3	2	3	3	2	2	2	2	2	2	2		2	2		2	2	3					1	1	2.0	18	4
15	SUN	1	1	1	1	1	1	2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	2	2	1.7	23	3
16	MON	2	2	1	1	2	2			2	2	1	2	2	2			3	2	2	2	2	3	3	2	2.0	20	3
17	TUE	1	1	1						3	2	3	2	2	3				3	3	4	3	3	3	2	2.5	16	6
18	WED	2	2	2	2	1	1	2	2	1	1	1	2	1	2										3	1.7	15	3
19	THU	3	2	3	2	2	2	2	4	10	6	5	3	3	3											3.6	14	12
20	FRI											5	3	2	2		3	3	4	5	4	4	4	4	3	3.5	13	7
21	SAT	3	4	3	3	3	3				1	2	2	2	2		1	2	2	1	1	1	2	2	1	2.0	20	4
22	SUN	1	1	1	1	1	1	1	1	1	2	3	2	2	2		2	2	2	3	3	3	3	3	2	1.9	23	4
23	MON	2	2	2	2	2	2	3	4	2	2	2	2	2	2		2	3	3	4	4	4	4	3	3	2.7	23	4
24	TUE	3	3	3	3	2	2	3	3	4	5	5	5	2	2		3	4	6	7	9	9	9	6	5	4.4	23	10
25	WED	4	5	5	4	4	3	3	7	15	6	4	2	1	1		2	5	4	5	5	4	4	3	3	4.3	23	17
26	THU	3	3	3	4	3	3	3	4	6	4	2	2	2	2		3	4	3	5	4	3	3	3	2	3.2	23	7
27	FRI	2	2	2	3	2	2	2	3	4	7	3	3	2	2		3	6	7	8	7	7	7	7	6	4.2	23	10
28	SAT	6	6	5	4	4	3	4	5	6	9	6	4	2	2		2	4	3	3	4	4	3	3	3	4.0	23	9
29	SUN	2	2	2	1	1	1	1	1	1	1	2	2	2	2			1	2	2	2	2	2	2	2	1.6	22	3
30	MON	1	1	1	1	1	1	1	1	2	2	1	2	1	1		3	2	3	3						1.5	18	4
MONTHLY MEAN		3	3	3	3	3	3	3	3	4	3	3	3	2	2		2	3	3	4	4	4	4	4	3	3.1		
NO. OF DAYS		27	26	26	25	25	25	23	23	25	26	29	28	29	29		23	26	26	25	24	24	24	25	26		589	
MAX.HRLY MEAN		6	7	7	8	8	7	8	7	15	8	8	8	8	5		5	6	7	8	9	9	9	9	8			

TABLE 3-70 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, OCTOBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	TUE				1	1	1	1	1			5	3	2			2	2	2	2	3	2	2	2	2	2.1	17	6
2	WED	2	1	1	1	1	1	1	1	2	3	2	2	2	2		3	5	3	3	3	2	2	2	2	2.0	23	5
3	THU	2	2	2	2	1	1	1	3	3	2	3	3	2	3		3	3	2	2	2	2	2	1	1	2.1	23	4
4	FRI	1	2	2	1	1	1	0	0	0	1	1	1	0	0		2	2	1	2	2	1	2	2	2	1.1	23	2
5	SAT	2	2	2	2	2	2	2	2	2	2	2	3	3	4		2	3	3	4	5	5	4	4	4	2.9	23	6
6	SUN	4	4	4	4	4	3	3	3	3	4	4	4	4	4		1	3	3	3	3	3	3	3	3	3.3	23	4
7	MON	3	2	2	2	1	1	1	3		6	7	6	4			6	8	8	7	7	8	6	6	5	4.7	21	9
8	TUE	5	5	5	5	5	5	5	6	9	14		3	3				5	5	4	4	4	4	4	4	5.1	20	16
9	WED	3	3	2	2	2	3	3	4	3	2	2	2	1	1		2	3	4	5	5	5	6	5	5	3.2	23	6
10	THU	5	7	4	4	4	4	4	7	16	13	8	5	2	1		2	3	4	6	6	5	6	6	5	5.5	23	21
11	FRI	5	5	5	5	5	5	5	5	6	5	5	5	4	3		4	6	6	6	6	6	6	5	5	5.1	23	7
12	SAT	6	5	4	5	4	4	4	4	2	2	2	1	1	2		1	2	2	3	3	3	3	4	3	3.0	23	6
13	SUN	3	2	2	2	2	2	2	2	1	1	1	1	1	1		0	1	1	3	3	3	3	3	3	1.8	23	3
14	MON	3	3	3	2	2	2	4	4	6	10	9	4	2	2		3	7	5	5	4	8	10	1	0	4.3	23	18
15	TUE	0	0	0	0	0	0	0	0	0							5	9	9	9	8	6	6	5	5	3.4	18	10
16	WED	5	5	5	5	4	5	3	4	6	10	6	4	3	2		2	5	10	12	13	12	11	11	8	6.5	23	14
17	THU	6	5	5	4	4	4	4	9	9	10	7	5	6	4		3	6	10	10	10	10	10	10	10	6.9	23	12
18	FRI	10	11	9	7	7	8	6	7	9	11	13	11	10	6		2	3	8	10	9	10	10	10	10	8.6	23	13
19	SAT	10	9	9	8	8	6	7	9	14	22	13	6	3	2		2	4	6	8	10	12	10	9	9	8.4	23	24
20	SUN	8	9	8	8	6	6	7	6	7	7	8	8	6	5		1	2	4	7	8	8	8	8	8	6.7	23	10
21	MON	6	5	5	5	5	5	6	8	7	3	3	2	1	1		2	6	9	11	10	9	9	8	6	5.6	23	11
22	TUE	3	2	1	1	0	0	2	2	2	1	1	1	1			1	3	2	2	2	3	3	2	1	1.7	22	5
23	WED	1	2	2	2	2	2	3	3	3	3	4	4	3	3		2	5	4	5	6	6	5	5	5	3.5	23	6
24	THU	5	5	6	6	5	5	5	6	10	12	8	5	3	3		2	3	6	8	8	7	8	8	8	6.1	23	13
25	FRI	8	10	8	7	6	5	6	8	13	13	9	5	3	4		3	6	4	4	4	3	3	3	3	5.9	23	15
26	SAT	3	3	3	3	3	3	3	2	3	4	8	11	12	7		2	5	9	14	10	7	6	5	4	5.7	23	15
27	SUN	4	5	5	4	3	3	3	3	4	7	10	12	11	7		1	5	9	8	6	6	6	5	5	5.6	23	13
28	MON	5	6	3	2	2	1	2	3	3	3	2	2	2	2		2	4	4	4	4	4	4	4	4	3.2	23	7
29	TUE	3	3	3	3	3	2	3	4	4	4	3	3	3	2			4	4	3	4	3	3	3	2	3.0	22	4
30	WED	2	2	2	2	2	1	2	3	4	2	2	1	2	2				4	4	4	5	5	4	4	2.8	21	6
31	THU	3	3	3	3	2	3	3	4	4	4	4	3	3	3			5	5	5	5	5	5	4	4	3.7	22	5
MONTHLY MEAN		4	4	4	3	3	3	3	4	5	6	5	4	3	3		2	4	5	6	6	6	5	5	4	4.3		
NO. OF DAYS		30	30	30	31	31	31	31	31	29	29	29	30	30	26		27	30	31	31	31	31	31	31	31		692	
MAX.HRLY MEAN		10	11	9	8	8	8	7	9	16	22	13	12	12	7		6	9	10	14	13	12	11	11	10			

TABLE 3-71 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, NOVEMBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI	4	3	3	2	3	3	4	4	3	3	3	7	4	4		3	5	4	3	3	3	3	2	2	3.3	23	10
2	SAT	1	1	1	2	1	1	1	2	2	1	1	1	2	2		1	1	1	1	1	1	1	1	1	1.3	23	2
3	SUN	1	1	1	1	1	1	1	1	3	1	1	1	1	1		0	1	1	2	2	2	2	3	2	1.4	23	5
4	MON	3	2	3	2	2	2	2	2	2	3	3	3	3	2		2	4	4	4	4	4	4	3	4	2.9	23	5
5	TUE	4	4	4	3	3	3	3	4	3	2	3	3	3	2			3	4	3	4	4	4	3	3	3.2	22	4
6	WED	4	3	3	3	3	3	3	3	2			3	2	1		1	4	3	3	3	2	2	2	2	2.5	21	5
7	THU	2	2	2	2	2	1	1	2	2	2	2	2	2	2		2	2	2	2	2	2	2	2	2	1.8	23	3
8	FRI	1	1	1	1	1	2	2	2	1	2	2	2	2	2		2	3	3	3	3	3	3	3	2	2.0	23	4
9	SAT	2	3	2	2	2	2	2	2	2	2	3	1	2	2		1	2	2	3	2	3	3	2	3	2.2	23	3
10	SUN	3	3	3	3	2	3	2	4	3	3	4	6	5	4		2	3	4	3	3	4	4	3	3	3.4	23	7
11	MON	3	3	3	3	3	3	3	3	3	3	2	3	3	2			2	4	4	5	5	4	3	3	3.1	22	5
12	TUE	3	3	3	3	2	2	3	3	3				3	2			3	3	3	4	4	4	4	4	3.2	19	5
13	WED		4	4	5	4	4	3	4	5	8	3	3	3	2		2	3	4	4	4	4	4	4	3	3.8	22	12
14	THU	3	3	3	2	2	2	3	2	2	1	2	2	2	2		2	3	3	3	3	3	3	3	3	2.5	23	4
15	FRI	3	3	3	2	2	2	2	3	3	3	3	3	2	2		2	3	3	4	3	4	3	4	4	2.8	23	4
16	SAT	4	3	3	3	3	2	2	2	3	4	4	3	2	2			2	2	2	3	2	2	2	1	2.6	22	6
17	SUN	3	2	2	2	2	2	2	2	2	2	4	4	4	2		0	1	2	2	2	4	2	3	1	2.2	23	4
18	MON	2	3	3	3	2	3	4	4	4	5	5	6	6	6		5	7	6	6	6	5	5	4	4	4.4	23	7
19	TUE	3	2	2	2	2	2	3	3	3	2	2	2	2	1			3	3	3	4	4	4	5	5	2.8	22	5
20	WED	5	4	3	3	3	3	4	4	4	4	4	5	4	3		4	5	5	5	4	5	5	3	3	3.9	23	8
21	THU	2	2	2	2	2	2	2	2	2			3	3	3		4	5	5	4	4	4	3	3	3	3.0	21	5
22	FRI	4	5	3	3	2	2	3	3	4	6				4		4	4	4	3	3	3	3	3	2	3.5	20	7
23	SAT	2	2	2	1	1	1	1	1	2	2	2	2	2	2		2	2	2	3	3	2	2	2	1	1.8	23	3
24	SUN																											
25	MON																											
26	TUE	2	2	2	2	2	2	3	3	3	2	2			2		3	3	3	3	3	2	3	2	2	2.5	21	4
27	WED	2	3	1	2	2	2	2	2	2	3	4	3	4	2		3	5	4	4	5	6	6	6	6	3.4	23	7
28	THU	7	7	6	7	7	6	5	5	4	4	5	5	4	4		3	4	4	4	4	4	4	4	3	4.8	23	9
29	FRI	3	3	4	2	2	2	1	2	2	2	2	2	2	2			3	2	2	2	1	2	1	1	2.0	22	7
30	SAT	1	1	1	1	0	1	1	2	1	2	2	1	2	2		2	2	2	2	2	2	2	2	2	1.5	23	2
MONTHLY MEAN		3	3	3	2	2	2	2	3	3	3	3	3	3	2		2	3	3	3	3	3	3	3	3	2.8		
NO. OF DAYS		27	28	28	28	28	28	28	28	28	25	24	25	26	28		22	28	26	28	28	28	28	28	28		625	
MAX.HRLY MEAN		7	7	6	7	7	6	5	5	5	8	5	7	6	6		5	7	6	6	6	6	6	6	6			

TABLE 3-72 HOURLY AVERAGES OF NITROGEN DIOXIDE, pphm (colorimetric analysis) WASHINGTON, DECEMBER 1963

DAY	OF	A M												P M												DAILY	NO.	5-MIN
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	MEAN	OF HR	MAX
1	SUN	2	2	2	2	1	0	1	1	2	2	1	1	2	2		2	2	2	3	3	3	3	3	3	2.0	23	4
2	MON	3	3	3	3	3	3	3	3	4	4	5	3	3	3			4	4	3	4	4	3	3	3	3.3	22	5
3	TUE	3	4	3	3	3	3	3	3	3	3	3	3	2	2			2	2	2	2	2	2	2	2	2.6	22	4
4	WED	2	2	2	2	2	2	2	2	2								3	2	1	2	2	1	1	1	1.7	17	3
5	THU																											
6	FRI																											
7	SAT																											
8	SUN																											
9	MON																											
10	TUE	2	2	2	2	3	3	3	3	2	3	2	2	3	3			3	3	3	3	3	3	3	3	2.7	22	4
11	WED	3	2	2	2	2	2	2	2	2	2	2	3	2	2		3	3	3	3	3	3	3	3	3	2.5	23	4
12	THU	3	3	3	3	3	2	2	2	2	2	2	2	3	3		4	4	4	4	4	4	4	4	4	3.1	23	5
13	FRI	4	3	3	3	3	3	3	4	4								3	3	3	3	3	3	3	3	3.1	17	5
14	SAT	3	2	2	2	2	2	2	1	1	1	1	1	2	2		2	3	3	3	3	3	3	3	3	2.1	23	3
15	SUN	3	2	2	2	2	2	2	2	2	2	2	2	2	3		2	2	3	3	3	2	2	2	2	2.2	23	4
16	MON	1	1	1	0	0	0	0				2	3	3	3		4	4	4	4	4	4	4	4	3	2.5	20	5
17	TUE	3	3	3	3	3	3	3	3	3	3		3	3	3			4	4	5	5	5	5	5	5	3.7	21	6
18	WED	5	4	4	4	4	4	4	4	4	4		4	4	4		3	5	5	4	4	4	4	4	4	4.0	22	5
19	THU	3	3	3	3	3	3	3	3	3			4	3	3		3	4	4	4	4	4	4	4	4	3.4	21	4
20	FRI	3	3	3	3	3	3	3	4	3	3			3	3		2	4	4	4	4	4	4	4	4	3.4	21	4
21	SAT	3	3	3	3	3	3	3					3	4	2		4	4	4	4	4	4	4	4	3	3.5	19	5
22	SUN	4	4	3	3	3	3	3	3	3	3	4	3	3	3		3	4	4	4	4	4	4	4	4	3.5	23	5
23	MON	4	4	4	4	4	3	3	3	3	3	2	2	2			2	3	3	4		4	4	4	4	3.2	21	5
24	TUE	4	4	3	3	3	3	3	3				2	4	5			5	5	5	5	4	4	4	4	3.8	19	6
25	WED	4	4	5	4	4	4	4	5	4	4	4	4	3	3		1	3	4	4	4	4	5	5	4	3.9	23	5
26	THU	5	6	5	4	4	4	4	4	4	4	4	4	5	7		3	5	4	5	5	5	5	6	8	4.7	23	9
27	FRI	10	12	8	5	5	5	6	7	7	6	7	9	6	3		2	3	3	3	3	3	4	3	4	5.4	23	13
28	SAT	4	4	4	3	3	2	2	2	3	3	3	3	3	3		2	3	3	4	4	4	3	3	3	3.1	23	4
29	SUN	3	2	2	2	2	2	2	4	3	4	4	3	3	3		2	3	4	5	5	5	4	3	3	3.2	23	5
30	MON	3	3	3	2	2	2	2	2	2	2	2	2	2				3	3	3	4	4	4	4	4	2.7	21	5
31	TUE	4	5	4	4	4	4	3	3	3		3	3	4	4										4	3.7	14	5
MONTHLY MEAN		3	3	3	3	3	3	3	3	3	3	3	3	3	3		3	3	4	4	4	4	4	3	3	3.2		
NO. OF DAYS		26	26	26	26	26	26	26	24	23	19	18	23	24	22		17	25	25	25	24	25	25	25	26		552	
MAX.HRLY MEAN		10	12	8	5	5	5	6	7	7	6	7	9	6	7		4	5	5	5	5	5	5	6	8			

TABLE 3-73 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, JANUARY 1962

DAY OF MONTH	DAY OF WEEK	A M 12	A M 1	A M 2	A M 3	A M 4	A M 5	A M 6	A M 7	A M 8	A M 9	A M 10	A M 11	P M 12	P M 1	P M 2	P M 3	P M 4	P M 5	P M 6	P M 7	P M 8	P M 9	P M 10	P M 11	DAILY MEAN	NO. OF HR	5-MIN MAX
1	MON																											
2	TUE																											
3	WED																											
4	THU	0		0	0	0	0	0	0	0	0	0	0							0	0	0	0	0	0	0.0	17	0
5	FRI	0		0	0	0	0	0	0	0		0	0	0		0	0	0	0	0	0	0	0	0	0	0.0	21	0
6	SAT	0		0	0	0	0	0									0	0	0	0	0	0	0	0	0	0.0	15	0
7	SUN	0		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
8	MON	0		0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0.0	21	1
9	TUE	0		0	0	0	0	0	0	0	0	0		0	0	0	0		0	0	0	0	0	0	1	0.0	21	1
10	WED	1		0	1	1	1	1	1				0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	20	1
11	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0.0	22	1
12	FRI	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
13	SAT	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
14	SUN	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
15	MON	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
16	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	0										0.0	14	0
17	WED																											
18	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
19	FRI	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
20	SAT	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
21	SUN	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
22	MON	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
23	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
24	WED	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
25	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.1	23	1
26	FRI	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
27	SAT	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
28	SUN	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
29	MON	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0.0	20	1
30	TUE	0		0	0	0	0	0	0	0	0		0	0	0	0			1	0	0	0	0	0	0	0.0	20	1
31	WED	0		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	3
MONTHLY MEAN		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0		
NO. OF DAYS		27		27	27	26	27	27	26	25	24	24	24	25	24	25	23	23	25	26	26	26	25	25	25		582	
MAX.HRLY MEAN		1		0	1	1	1	1	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1			

Note: Total oxidant data are not corrected for sulfur dioxide interference.

TABLE 3-74 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, FEBRUARY 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	22	0
2	FRI	0		0	0	0	0	0	0	0	0	0	0	0	0						0	0	0	0	0	0.0	18	0
3	SAT	0		0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
4	SUN	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.0	23	1
5	MON	0		0	0	0	0	0	0	0	0	0				0	0	0	0	0	0	0	0	0	0	0.0	20	1
6	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
7	WED	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
8	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
9	FRI	0		0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	0	0	0	0.4	23	1
10	SAT	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
11	SUN	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
12	MON	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
13	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.0	23	1
14	WED	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	22	1
15	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
16	FRI	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
17	SAT	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
18	SUN	0		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.1	23	1
19	MON	0		0	0	0	0	0	0	0	0	0	0	0	0	0					0	0	0	0	0	0.0	19	1
20	TUE	0		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
21	WED	0		0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	21	0
22	THU																											
23	FRI	0		0	0	0	0	0	0	0	0		0	0	0			0	0	0	0	0	0	0	0	0.0	20	0
24	SAT	0		0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0.0	22	0
25	SUN	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
26	MON	1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
27	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	1				0	0	0	0	0	0	0.0	20	1
28	WED	0	0	0	0	0	0	0	0				0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	21	1
MONTHLY MEAN		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0		
NO. OF DAYS		27	2	26	27	27	27	27	27	26	24	23	26	26	26	25	22	24	24	25	27	27	27	27	27		596	
MAX. HRLY MEAN		1	0	0	0	0	0	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	0	0	0			

Note: Total oxidant data are not corrected for sulfur dioxide interference.

TABLE 3-75 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, MARCH 1962

DAY OF		A M												P M												DAILY	NO.	5-MIN
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	MEAN	OF HR	MAX
1	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.1	23	1
2	FRI	0		0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0.1	23	2
3	SAT	0		0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0.2	23	2
4	SUN	0		0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.1	23	2
5	MON	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
6	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
7	WED	0			1	1	0	0	0	0				1	1	1	2	1	1	0	0	0	0	0	0	0.4	19	2
8	THU	0			0	0	0	0			0	0	1	1	1	0	0	1	1	0	0	0	0	0	0	0.2	20	2
9	FRI	0		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
10	SAT	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
11	SUN	0		0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.1	23	2
12	MON	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.0	23	1
13	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	2
14	WED	0		1	1	1	0	0	0	0	0						0	0		0	0	0	0	0	0	0.2	17	1
15	THU	0		0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0.2	23	3
16	FRI	0		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.1	23	2
17	SAT	0		0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0.3	23	2
18	SUN	1		1	1	0	0	0	0	0	1	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0.4	23	2
19	MON	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
20	TUE	0		0	0	0	0	0	0	0	0	0	0	1	1	1	2									0.4	15	3
21	WED																											
22	THU																											
23	FRI																											
24	SAT	0		0	0	0	0	0	0	0	1	2	3	3	3	3	4	4	2	1	0	0	0	0	0	1.1	23	5
25	SUN	0		1	0	0	0	0	0	0	0	0	1	2	3	2	2	3	1	0	0	0	0	0	0	0.7	23	4
26	MON	0		0	0	0	0	0	0	0	0	0	1	3	4	4	3	2	1	0	0	0	0	0	0	0.8	23	5
27	TUE	0		1	0	0	0	0	0	0	1	1	2	3	2	3	4	3	2	1	0	0	0	0	1	1.0	23	6
28	WED	0			0	0	0	0	0	0	0	2	3	3	3	3	4	5	3	1	0	0	0	0	0	1.2	22	6
29	THU	0		0	0	0	0	0	0	0	0	0		5	6	5	4	1	1	0	1	1	1	2	1	1.2	22	7
30	FRI	2		4	1	1	0	0	0	1	1	1		3	1	3	2	1	1	1	1	0	2	2	2	1.3	22	4
31	SAT	2		0	0	0	1	1	1	1	1	2	1	2	2	1	2	2	0	1	0	0	1	1	1	0.9	23	4
MONTHLY MEAN		0		0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0.4		
NO. OF DAYS		28		25	28	28	28	28	27	27	27	26	24	27	27	27	28	27	26	27	27	27	27	27	27		620	
MAX. HRLY MEAN		2		4	1	1	1	1	1	1	1	2	3	5	6	5	4	5	3	1	1	1	2	2	2			

Note: Total oxidant data are not corrected for sulfur dioxide interference.

TABLE 3-76 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, APRIL 1962

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	2			0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0	0.3	22	3
2	MON	0		0	0	0	0	0	0	0				0	1	0	0	0	0	0	0	0	0	0	0	0.1	20	2
3	TUE	0		0	0	0	0	0	0	0	1	3	2	2	1	2	2	1	2	1	0	0	0	0	0	0.6	23	6
4	WED	0		0	0	0	0	0	0	0			2	4	5	4	3	3	3	1	1	1	1	1	2	1.4	21	7
5	THU	2		0	0	0	0	0	0	0	1	2	5	3	6	6				0	0	0	0	0	0	1.2	20	8
6	FRI	0			0	0	0	0	0	0	0	0	0	0	1	2	1	2	2	2	1	0	1	2	1	0.6	22	3
7	SAT	0		2	2	1	1	1	0	0	0	1	0		1	2	1	0	0	0	0	0	0	0	0	0.5	22	3
8	SUN	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	22	0
9	MON	0			0	0	0	0	0	0	0		0	0	0	0	1	1	1	2	1	1	0	0	0	0.3	21	3
10	TUE	1		2	2	1	0	0	0	0	0	0	1	1	2	2	3	2	1	0	0	0	0	0	0	0.8	23	4
11	WED	0		0	0	0	0	0	0	0				0	0	0	0	0	0	0	0	0	0	0	0	0.0	20	1
12	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
13	FRI	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
14	SAT	0		1	2	1	0	0	0	0	1	1	1	1	1	2	2	2	2	1	0	0	0	0	0	0.7	23	3
15	SUN	0		0	0	0	0	0	1	1	0	0	1	1	3	2	2	2	1	0	0	0	0	0	0	0.6	23	4
16	MON	0		0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	22	1
17	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0.2	23	3
18	WED	0		0	0	0	0	0	0	0	1		3	3	2	2	1	1	1	0	0	0	0	0	0	0.6	22	5
19	THU	0		0	0	0	0	0	0	0	0	1	1	2	3	2	1	3	1	1	0	1	1	0	0	0.8	23	5
20	FRI	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
21	SAT	0		0	0	0	0	0	0	0	2	4	4	5	4	4	4	5	4	2	0	0	0	0	0	1.6	23	7
22	SUN	0		0	0	0	0	0	0	0	0	0	2	4	5	4	4	2	3	1						1.4	18	6
23	MON				0	0	0	0	0	0	0	0		1	1	2		2	1	1	1	1	0	0	1	0.5	19	3
24	TUE	1		1	0	0	0	0	0	0	1	1	3	3	3	3	3	4	3	2	0	0	0	0	0	1.2	23	5
25	WED	0		0	0	0	0	0	0	0	0			2	4	4	3	3	2	1	0	0	0	0	0	0.9	21	5
26	THU	0		0	0									0	1	0	1	1	0	0	0	0	0	0	0	0.3	15	2
27	FRI	1		2	1	1	1	1	1	0	2	1	3	5	6	6	4	2	3	0	0	0	1	1	0	1.8	23	7
28	SAT	0	0	1	0	0	1	0	0	2	1	2	3	4	4	3	3	2	1	1	0	0	0	1	1	1.2	24	5
29	SUN	0	0	1	0	0	0	1	0	1	1	1	3		3	3	2	1	1	2	2	1	1	1	1	1.0	23	4
30	MON	0	0		0	0	0	0	0	0	0	1		1	2	2	4	5	5	3	2	1	0	0	0	1.2	22	6
MONTHLY MEAN		0		0	0	0	0	0	0	0	0	1	1	2	2	2	2	2	1	1	0	0	0	0	0	0.7		
NO. OF DAYS		29	3	24	30	29	29	29	29	29	26	22	24	28	30	30	28	29	29	30	29	29	29	29	29		652	
MAX.HRLY MEAN		2	0	2	2	1	1	1	1	2	2	4	5	5	6	6	4	5	5	3	2	1	1	2	2			

Note: Total oxidant data are not corrected
for sulfur dioxide interference.

TABLE 3-77 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, MAY 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	TUE	0		0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	1	1	0	1	0	0.4	23	3
2	WED	1	0	1	1	1	1	0	0			0	1	1	0	1	1	1	0	0	0	0	0	0	0	0.4	22	2
3	THU	0		0	0	0	0	0	0	0	0	0	0	0	0						1	1	1	0	0	0.2	18	3
4	FRI	0		0	0	0	0	0	0	2	3	2	3	3	3	3	3	4	3	2	0	0	0	0	0	1.4	23	5
5	SAT	0		0	0	0	0	0	0	2	5	5	4	5	5	4	4	5	4	2	1	0	0	0	0	2.0	23	7
6	SUN	1		1	0	0	0	0	0	2	3	6	7	6	6	7	7	6	5	5	3	3	3	3	4	3.3	23	8
7	MON	3		2	1	2	1	0	0	2	2		3	3	3	4	4	4	4	3	1	0	0	0	1	1.9	22	5
8	TUE	0		0	0	0	0	0	0	1	2	2	3	4	4	1	0	0	0	0	0	0	0	0	0	0.8	23	5
9	WED	0		0	0	0	0	0	0	0					5	5	5	5	4	3	1	1	0	0	0	1.5	19	6
10	THU	0		1	0	0	0	0	0	0	1	1	2	3	3	3	2	1	1	0	1	0	1	1	1	1.0	23	5
11	FRI	1		1	1	0	0	0	0	0	1	1	1	3	4	4	0	1	0	0	0	1	2	1	1	1.0	23	6
12	SAT	0		0	0	0	0	0	0	2	4	3	4	6	6	5	5	4	5	3	1	2	1	3	3	2.4	23	7
13	SUN	3		3	4	3	2	0	1	1	1	1	2	3	4	3	3	4	3	2		0	0	0	1	2.0	22	5
14	MON	1		1	0	0	0	0	0	0	0		2	3	3	0	1	2	2	1	0	0	0	0	0	0.7	22	4
15	TUE	0		0	0	0	0	0	0	1	4	6	6	6	7	7	7	6	4	2	0	2	5	5	4	3.1	23	8
16	WED	3		3	1	1	2	1	1	1	1	0			5	4	4	6	6	5	4	3	3	2	1	2.5	21	8
17	THU	2		2	2	2	1	1	2	0	0	2	3	4	7	8	8	8	2	1	1	1	0	0	1	2.4	23	11
18	FRI	1		1	0	1	0	0	2	6	6	7	7		6	7	6	6	7	5	1	0	0	0	0	3.1	22	10
19	SAT	0		0	1	2	1	1	3	6	7	7	7	8	8	7	7	7	6	6	5	3	2	3	4	4.4	23	10
20	SUN	3		3	3	2	2	3	3	5	7	8	8	9	8	8	8	8	6	5	3	2	1	2	1	4.7	23	9
21	MON	1		1	2	0				0				1	1	2	3	3	4	2	0	0	0	0	2	1.3	17	5
22	TUE	2		2	2	1	0	0	0	0	2	4	4	5	6	6	5	5	4	4	3	1	0	1	1	2.5	23	7
23	WED	2		1	0	0	1	0	0	0	0				5	5	5	4	4	3	1	2	2	2	2	1.9	20	6
24	THU	2		0	0	2	0	0	0	0	3	4	4	3	5	5	5	4	4	1	1	1	0	1	0	2.0	23	7
25	FRI	1		0	0	0	1	1	1									6	6	4	1	0	0	0	0	1.4	15	7
26	SAT	0		0	0	0	0	1	3	4	5		5	6	6	6	6	7	6	5	3	1	2	2	2	3.2	22	7
27	SUN	4			2	1	0	0	0	0	1	2	3	6	7	7	4	2	4	3	1	0	0	0	0	2.1	22	8
28	MON	0		0	1	1	1	1	1	1	1	1	1		1	2	1	2	2	2	1	2	2	1	1	1.3	22	3
29	TUE	0		2	1	0	0	0	1	1	2	2	3		3	3	3	2	2	2	1	0	0	0	1	1.2	22	4
30	WED	1		0	0	0	0	0	0	0	0	2	2	3	4	4	4	4	3	2	1	0	0	0	1	1.4	23	5
31	THU	1		1	0	0	0	0	0	2	2		2	4	3	3	1	1	2	1	0	1	1	1	1	1.2	22	5
MONTHLY MEAN		1		1	1	1	0	0	1	1	2	3	3	4	4	4	4	4	3	2	1	1	1	1	1	1.9		
NO. OF DAYS		31	1	30	31	31	30	30	30	29	27	23	26	24	30	29	29	30	30	30	30	31	31	31	31		675	
MAX.HRLY MEAN		4	0	3	4	3	2	3	3	6	7	8	8	9	8	8	8	8	7	6	5	3	5	5	4			

Note: Total oxidant data are not corrected for sulfur dioxide interference.

TABLE 3-78 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, JUNE 1962

DAY OF		A M												P M														
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO. OF HR	5-MIN MAX
1	FRI	1		0	0	0	0	0	0	2	3	4	5	5	4	4	5	5	4	3	1	0	0	0	0	2.0	23	9
2	SAT			0	0	0	0	0	0	2	6	10	9	6	6	6	7	7	7							4.0	16	13
3	SUN			0	0	1	1	1	0	2	0	0	0	1	2	2	1	3	4	2	2	1	0	0	0	1.0	22	6
4	MON	0		0	1	2	1	1	2	1	2	4	4	4	5	4	4	4	3	3	3	3	2	2	2	2.4	23	7
5	TUE	1		3	2	1	1	0	1	1	1				0	2	2	0	0	0	0	0	0	0	0	0.8	20	4
6	WED	0		1	1	0	0	0	1	2			4	4				4	4	3	1	0	0	0	0	1.4	18	5
7	THU	0		1	2	1	1	1	1	2	3	2	3	7	9	7	6	8	7	6	3	1	3	3	3	3.5	23	12
8	FRI	3		3	4	2	1	0	1	5	7	8	9	7	7	9	7	7	6	4	2	3	3	2	1	4.4	23	10
9	SAT	1		2	2	1	0	0	1	3	6	3	6	7	7	8	7	7	6	5	4	3	3	2	3	3.8	23	10
10	SUN	2		0	1	0	0	1	2	3	3	4	4	4	5	5	6	5	3	5	3	2	0	1	2	2.7	23	8
11	MON	1		2	1	1	0	1	1	2	3	4	3	4	6	6	4	3	4	3	1	2	2	2	2	2.4	23	7
12	TUE	2		2	1	1	1	1	1	1		2	2	2	3	3	2	2	2	1	0	1	0	1	0	1.3	22	4
13	WED	1		1	0	0	0	0	0	0	0						0	0	0	0	0	0	0	0	0	0.2	18	2
14	THU	0		1	0	0	0	0	1	1	2	4	6	7	10	11	7	9	7	6	4	3	4	4	3	3.8	23	16
15	FRI	3		3	2	2	2	1	1	3	4	5	5	5	5	4	6	6	6	4	2	1	2	1	1	3.2	23	7
16	SAT	1		1	1	1	1	2	3	4	5	5	7	7	7	7	8	7	6	6	3	0	0	0	0	3.5	23	9
17	SUN	0		0	0	0	0	0	2	4	6	6	8	7	8	8	8	8	7	6	3	1	1	1	1	3.6	23	10
18	MON	1		4	3	2	1	0	4	4	5	9	11	12		8	8	8	7	6	4	2	1	2	3	4.7	22	13
19	TUE	3		2	1	1	1	0	1	4	7	6	6	6	5	5	4	3	1	0	0	0	0	0	0	2.4	23	9
20	WED	0		1	0	0	0	0	1	1	1	2	2	2	2	3	3	3	2	1	1	2	2	1	1	1.3	23	4
21	THU	0		1	1	0	0	0	0	1	3	4	4	4	5	5	4	5	5	4	2	0	0	0	0	2.1	23	6
22	FRI	0		0	0	0	0	0	1	3	2	3	6	6	6	4	4	5	5	1	2	4	4	2	3	2.7	23	7
23	SAT	3		3	2	1	0	0	1	2	3	4	5	4	5	4	4	3	3	2	1	1	2	0	0	2.3	23	7
24	SUN	0		1	0	1	0	0	1	3	5	7	7	8	8	7	6	5	5	4	3	2	1	0	0	3.2	23	11
25	MON	0		0	1	0	1	1	2	3			8	8						5	3	6	3	1	1	2.7	16	10
26	TUE	1		0	0	0	0	0	1	5	7	5	6	8	9	10	10	6	6	4	4	2	0	0	0	3.6	23	12
27	WED	1		1	1	1	0	1	1	1	1	1		5	6	7	8	8	8	7	4	2	0	0	0	2.9	22	9
28	THU	0		0	0	0	0	0	1	2			5	5	4	4	3	3	4	4	2	1	2	1	1	2.0	21	6
29	FRI	1		0	0	0	0	0	1									1	1	1	0	0	0			0.4	13	4
30	SAT																											
MONTHLY MEAN		1		1	1	1	0	0	1	2	4	4	5	6	5	6	5	5	4	3	2	2	1	1	1	2.6		
NO. OF DAYS		27		29	29	29	29	29	29	28	24	23	25	26	24	25	26	28	28	28	28	28	28	27	27		624	
MAX.HRLY MEAN		3		4	4	2	2	2	4	5	7	10	11	12	10	11	10	9	8	7	4	6	4	4	3			

Note: Total oxidant data are not corrected
for sulfur dioxide interference.

TABLE 3-79 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, JULY 1962

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	0		0	0	0	0	0	2	5	6	6	6	5	5	4	4	3	3	2	1	0	0	1	2	2.4	23	7
2	MON	1		2	2	1	1	0	0			3	4	3	5	6	4	4	2							2.6	15	7
3	TUE																											
4	WED																											
5	THU																											
6	FRI																											
7	SAT																											
8	SUN	1	1	1	2	2	1	1	1	2				3	4	4	3	3	3	3	1	1	2	2	0	2.0	21	4
9	MON																											
10	TUE																											
11	WED										5			11	11	10	9	9	6	5	4	2	1	1	1	5.9	13	12
12	THU	1		0	0	0	0	0	0	2	4				4	6	7	10	6	4	2	1	1	1	0	2.5	20	10
13	FRI	0			2	1	1	0	2	3	5	5	5	4	4	4	4	4	5	5	3	1	0	0	0	2.6	22	5
14	SAT	0			0	0	0	0	0	1	3	1	2	4	5	6	8	8	9	5	1	0	0	0	0	2.5	22	10
15	SUN	0			0	1	1	1	1	1	2	2	1	3	6	7	8	7	6	5	4	2	1	1	1	2.6	22	8
16	MON	1			1	1	1	0	0	0	0	0	0	0		0	0	2	3	3	3	2	2	2	2	1.1	21	4
17	TUE	2			0	0	0	0	0	0	0	1	4	3	1	1	2	1	2	2	2	0	0	0	0	0.9	22	5
18	WED	1			0	0	0	0	0	0					0	0	0	2	2	1	1	1	1	0	0	0.5	18	3
19	THU																											
20	FRI	0		0	0	0								7		6	5	2	3	1	1	1	0	0	0	1.7	15	7
21	SAT	0			2	2	1	1	1	1	2	4	4	4	5	4	4	3	3	3	1	0	1	1	1	2.2	22	5
22	SUN	1			2	2	1	1	1	1	2		5	5	5	5	5	5	4	4	2	1	0	0	0	2.4	21	5
23	MON	0		0	0	0	0	0	1	3	5	6	6	4		5	4	3	4	3	3	2	1	1	1	2.3	22	8
24	TUE	1		3	3	3	2	0	0	0	1	2	2	3			4	4	4	4	2	1	1	0	0	1.9	21	4
25	WED	0		0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	3	3	3	1	1	0	0	0.6	23	3
26	THU	0		0	0	0	0	0	0	2	3	4	5	4	3	3	3	4	4	3	3	2	2	2	1	2.0	23	6
27	FRI	0		0	1	0	0	0	0	0	1			3	3	3	3	4	4	4	2	0	0	0	0	1.4	21	4
28	SAT	0		0	0	0	0	0	0	2	6	5	4	4	5	5	5	6	6	3	2	2	1	0	2	2.4	23	6
29	SUN																											
30	MON											0	2	3	3	9	10	7	5	3	2	1	1	1	0	3.4	14	12
31	TUE	1		0	0	0	0	0	0	0	2	4	5		6	6	6	7	7	5	3	0	0	0	0	2.3	22	7
MONTHLY MEAN		0			1	1	0	0	0	1	3		3	4	4	4	4	5	4	3	2	1	1	1	1	2.1		
NO. OF DAYS		20	1	12	20	20	19	19	19	18	17	15	16	19	18	21	22	22	22	21	21	21	21	21	21		446	
MAX.HRLY MEAN		2	1	3	3	3	2	1	2	5	6	6	6	11	11	10	10	10	9	5	4	2	2	2	2			

Note: Total Oxidant data are not corrected for sulfur dioxide interference.

TABLE 3-80 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, AUGUST 1962

DAY OF MONTH	DAY OF WEEK	A M 12	1	2	3	4	5	6	7	8	9	10	11	P M 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO. OF HR	5-MIN MAX
1	WED																											
2	THU																											
3	FRI																											
4	SAT																											
5	SUN																											
6	MON																											
7	TUE																											
8	WED																											
9	THU																											
10	FRI										1	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0.3	15	1
11	SAT	0		0	0	0	0	0	0	1	2	2	3	3	4	4	5	5	4	4	1	1	2	1	0	1.8	23	5
12	SUN	0		1	0	0	0	0	0	3	4	4	6	8	9	7	6	6	5	4	2	1	1	1	2	3.0	23	9
13	MON	3	5		4	0	1	0	2				6	5	5	5		2	5	4	3	1	1	3	2	3.0	19	7
14	TUE	2	1		2	0	0	0	0							6	6	6	6	5	2	1	0	0	0	2.1	17	7
15	WED	0		0	0	0	0	0	1	3	5	9	12	13	13	12	11	7	4	5	2	2	2	3	3	4.7	23	17
16	THU	2		3	2	2	1	0	0	1	2	6	7	7	6	5	6	3	3	3	1	1	1	1	2	2.8	23	10
17	FRI	0		1	0	1	0	0	0	2	5	5	7	7	6	3	8	9	8	6	2	1	1	1	2	3.2	23	10
18	SAT	1		1	1	1	1	0	1	2	3	4	5	5	6	6	6	6	5	4	0	0	0	1	0	2.6	23	8
19	SUN	0		1	0	0	0			3	4	5			7	8	7	8	8	5	5	5	5	5	4	4.2	19	10
20	MON	2		0	0	1	1	0	1	2		2	3	6	6	7	7	7	7	6	4	3	3	4	5	3.4	22	8
21	TUE	4		4	2	0	0	0	0	2						8	9	6	6	5	4	2	0	0	1	3.0	18	11
22	WED	2		1	2	1	0	0	0	1		7	7					6	6	4	3	1	0	0	0	2.3	18	9
23	THU	0		0	0	0	0	0	0	2	4	5	5	6	6	7	5	5	4	4	2	1	1	1	2	2.7	23	8
24	FRI	1		1	1	1	0	0	0	2	3	4	6			5	4	3	3							2.2	15	7
25	SAT																											
26	SUN																											
27	MON																											
28	TUE	0		0	0	0	0	0	0	0	2	3	5	5	6	5	6	4	5	3	1	1	1	1	1	2.1	23	7
29	WED	1		1	1	0	0	0	0	2	4	5	6	6	6	7	7	7	6	4	1	0	0	0	0	2.8	23	8
30	THU	1		0	0	0	0	0	1							6	7	7	6	3	1	1	1	0	0	2.1	17	8
31	FRI	0		0	0	0	0	0	0	1	1	8	10	7	7	7	7	7	6	4	4	3	2	4	2	3.4	23	17
MONTHLY MEAN		1		1	1	0	0	0	0							6	6	5	5	4	2	1	1	1	1	2.8		
NO. OF DAYS		19	2	16	18	18	18	17	17	15	13	15	15	13	14	18	17	19	19	18	18	18	18	18	18		390	
MAX.HRLY MEAN		4	5	4	4	2	1	0	2	3	5	9	12	13	13	12	11	9	8	6	5	5	5	5	5			

Note: Total oxidant data are not corrected for sulfur dioxide interference.

TABLE 3-81 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, SEPTEMBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SAT	1		1	0	0	0	0	0	2	6	11	9	9	9	11	9	7	5	3	1	1	0	0	0	3.6	23	14
2	SUN	0		0	0	1	1	1	0	1	3	4	5	5	4	4	4	2	1	0	1	1	1	2	2	1.8	23	6
3	MON	1		0	0	1	0	0	0	0	0	0	0	2	2	1	2	3	4	3	4	3	2	2	2	1.4	23	5
4	TUE	2		0	1	1	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	23	2
5	WED	0		0	0	0	0	0	0	0					4	9	5	1	2	1	0	0	0	0	0	1.2	19	12
6	THU	0		0	1	0	0	0	0	1	1	1	3	2	2	3	3	3	3	2	1	1	0	0	0	1.1	23	4
7	FRI	0		0	0	0	0	0	0	0	0	2	4	5	6	6	6	5	5	2	1	1	1	1	0	1.9	23	8
8	SAT	0		0	0	0	0	0	0	0	2	5	6	6	6	6	5	5	4	2	2	2	1	2	3	2.5	23	7
9	SUN	3		2	1	0	0	0	0	4	4	3	2	5	5	4	4	3	2	2	1	1	1	1	2	2.2	23	6
10	MON	1		0	0	0	0	0	0	1	1	2	3					0	0	0	0	0	0	0	0	0.4	19	3
11	TUE	0		0	0	0	0	0	0	1	2	2	3	3	3	4	3	4	3	1	1	1	1	1	0	1.3	23	5
12	WED	0		0	0	0	0	0	0	0	3	4	6	5	6	6	6	7	7	2	2	1	0	1	0	2.4	23	9
13	THU	1		0	1	0	1	1	1	7	9	12	8	9	8											4.3	13	15
14	FRI																											
15	SAT	0		0	0	0	0	2	4	5	5	7	7	6	6	5	4	3	2	1	0	1	0	0	0	2.6	23	9
16	SUN	0		0	0	0	0	0	0	2	4	4	5	3	3	4	5	3	2	2	1	1	0	1	0	1.7	23	6
17	MON																											
18	TUE	0		0	0	0	0	0	0	0	1	1	2	2	2	2	2	2	2	0	0	0	0	0	0	0.7	23	3
19	WED	0		0	1	0	0	0	0	1		3	4	3	3	2	2	1	1	2	1	1	0	0	0	1.1	22	5
20	THU	0		0	0	0	0	0	0	0	1	1	2	2	3	2	2	2	1	0	0	0	0	0	0	0.7	23	3
21	FRI	0		0	0	0	0	0	0	1	2	3	4	4	5	4	4	4	2	1	1	0	0	0	1	1.5	23	6
22	SAT	0		0	0	0	0	0	0	0	0	3	4	4	3	3	4	3	1	1	0	0	1	1	1	1.1	23	5
23	SUN	0		1	0	0	0	1	0	0	0	0	0	2	3	3	2	2	2	1	0	0	0	0	0	0.8	23	5
24	MON	0		0	0	0	0	0	0	0					9	9	5	5	4	2	1	1	1	3	3	2.2	19	13
25	TUE	1		2	2	0	0	0	0	0	1	0	1	3	1	0	1	1	1	1	1	1	0	0	0	0.7	23	4
26	WED	0		0	0	0	0	0	0	0		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.0	22	1
27	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
28	FRI	0		1	1	0	0	0	0	0	1	1	2	2	1	1	1	0	0	0	0	0	0	0	0	0.4	23	3
29	SAT	0										0	2	2	3	3	3	3	1	0	0	0	0	0	0	1.0	15	4
30	SUN	0		0	0	0	0	0	0	0	1	3	5	5	6	6	6	4	2	0	0	0	0	0	0	1.7	23	8
MONTHLY MEAN		0		0	0	0	0	0	0	1	2	3	3	4	4	4	3	3	2	1	1	1	0	1	0	1.4		
NO. OF DAYS		28		27	27	27	27	27	27	27	23	26	26	25	27	26	26	27	27	27	27	27	27	27	27		612	
MAX.HRLY MEAN		3		2	2	1	1	2	4	7	9	12	9	9	9	11	9	7	7	3	4	3	2	3	3			

Note: Total oxidant data are not corrected for sulfur dioxide interference.

TABLE 3-82 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, OCTOBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON	0		0	0	0	0	0	0				4	4	6	5	4	4	1	1	1	0	0	0	0	1.5	20	7
2	TUE	0		0	0	0	0	0	0	0	1	2	5	5	6	5	5	4	2	1	0	1	1	1	1	1.6	23	7
3	WED	1		0	0	0	0	0	0	0	1	3	5	4	2	5	4	2	1	1	1	1	1	1	1	1.4	23	6
4	THU	1		0	0	1	1	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	23	1
5	FRI	0		0	0	0	0	0	0	0	0	0	2	3	4	3	4	3	2	0	0	0	0	0	0	0.9	23	5
6	SAT	0		0	0	0	0	0	0	0	0	1	3	4	6	5	6	5	2	1	1	0	1	0	1	1.5	23	7
7	SUN	1		1	1	2	1	1	1	1	3	5	5	6	6	7	7	5	2	1	0	0	0	0	0	2.4	23	8
8	MON	0		0	0	0	0	0	0	0	0	0	2	2	4	4	1	3	3	2	1	1	1	0	0	1.0	23	6
9	TUE	0		0	0	0	0	0	0	0	0	1	2	1	1	2	1	1	0	0	0	0	0	1	1	0.5	23	3
10	WED	1		1	0	0	0	0	0	0			2	4	5	4	3	3	1	0	0	0	0	0	0	1.1	21	5
11	THU	0			0	0	0	0	0	0	0	1	2	3	3	3	4	2	1	0	0	0	0	0	0	0.9	22	5
12	FRI	0		0	0	0	0	0	0	0							3	2	1	0	0	0	0	0	0	0.4	17	4
13	SAT	0			2	1	1	0	1	1	2	3	4	5	6	6	5	3	1	1	0	0	0	0	0	1.9	22	7
14	SUN	0		0	0	0	0	0	0	0	0	1	3	4	5	5	5	5	3	1	2	2	2	2	3	1.9	23	6
15	MON	4		1	1	0	0	0	0	0		1	1	3	3	2	1	1	0	0	1	1	1	1	0	1.0	22	5
16	TUE	1		0	0	0	0	0	0	0	0	1	0	0	1	2	1	1	0	2		2	2	0	0	0.6	22	3
17	WED	0		0	0	0	0	0	0	0			0	1	3	3	3	2	0	0	0	0	0	0	0	0.5	21	4
18	THU	0		0											5	5	4	2	0	0	0	0	0	0	0	1.2	13	6
19	FRI	0		0	0	0	0	0	0	0	0	0	1	3	3	4	3	2	1	0	0	0	0	0	0	0.7	23	4
20	SAT	0		0	0	0	0	0	0	0	0	1	5	6	7	8	6	5	3	1	0	0	0	0	0	1.9	23	9
21	SUN	0		0	1	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0.3	23	2
22	MON	0		0	0	0	0	0	0	0	1	2	3	2	1	2	2	0	0	0	0	0	0	1	1	0.7	23	4
23	TUE	0		0	0	0	0	0	0			0	0	0	2	1	2	1	0	0	1	0	0	0	0	0.4	21	3
24	WED	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
25	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
26	FRI	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
27	SAT	0		0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0.2	23	1
28	SUN	0		0	0	0	0	0	0	0	0	0	0	1	2	3	2	1	1	1	1	1	0	0	0	0.5	23	4
29	MON	0		0	0	0	0	0	0	0	0	0				1	1	0	0	1	0	0	0	0	0	0.2	20	2
30	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
31	WED	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	22	0
MONTHLY MEAN		0		0	0	0	0	0	0	0	0	1	2	2	3	3	3	2	1	0	0	0	0	0	0	0.8		
NO. OF DAYS		31		28	30	30	30	30	30	28	24	26	28	28	29	30	31	31	31	31	30	31	31	31	31		680	
MAX.HRLY MEAN		4		1	2	2	1	1	1	1	3	5	5	6	7	8	7	5	3	2	2	2	2	2	3			

Note: Total oxidant data are not corrected
for sulfur dioxide interference.

TABLE 3-83 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, NOVEMBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
2	FRI	0		0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0.0	22	1
3	SAT	0		0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0.0	22	0
4	SUN	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
5	MON	0		0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0.0	22	0
6	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0.0	21	0
7	WED																											
8	THU																											
9	FRI																											
10	SAT																											
11	SUN																											
12	MON																											
13	TUE																											
14	WED																											
15	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.0	23	1
16	FRI	0		0	0	0	0	0	0	0		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.1	22	2
17	SAT	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
18	SUN	0		0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0.0	21	0
19	MON	0		0	0	0	0	0	0	0	0			0	0	0		0	0	0	0	0	0	0	0	0.0	20	0
20	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
21	WED	0		0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0.0	21	0
22	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.1	23	2
23	FRI	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
24	SAT	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
25	SUN	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
26	MON	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
27	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
28	WED	0		0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0.0	22	1
29	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
30	FRI	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
MONTHLY MEAN		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0		
NO. OF DAYS		22		22	22	22	22	22	22	22	21	20	20	21	21	19	18	22	22	22	22	22	22	22	22		492	
MAX.HRLY MEAN		0		0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0			

Note: Total oxidant data are not corrected
for sulfur dioxide interference.

TABLE 3-84 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, DECEMBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SAT	0		0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	0	1						0.3	18	4
2	SUN																											
3	MON																											
4	TUE																											
5	WED																											
6	THU																											
7	FRI																											
8	SAT																											
9	SUN																											
10	MON																											
11	TUE																											
12	WED																											
13	THU																											
14	FRI																											
15	SAT																											
16	SUN	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
17	MON	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0.0	22	1
18	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
19	WED	0		0	0	0	0	0	0	0	0							0	0	0	0	0	0	0	0	0.1	17	1
20	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.1	23	1
21	FRI	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	22	1
22	SAT	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
23	SUN	0		0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0.2	23	1
24	MON	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
25	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
26	WED	0		0	0	0	0	0	1	1	1		1	1	1	1	1	1	1	1	1	1	0	1	1	0.5	22	1
27	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
28	FRI	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
29	SAT	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
30	SUN	0		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
31	MON	0		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
MONTHLY MEAN		0		0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0.1		
NO. OF DAYS		17		16	17	17	17	17	17	17	17	15	15	16	16	16	16	17	17	17	16	16	16	16	16		377	
MAX.HRLY MEAN		0		1	1	0	0	0	1	1	1	0	1	1	1	1	2	1	1	1	1	1	1	1	1			

Note: Total oxidant data are not corrected for sulfur dioxide interference.

TABLE 3-85 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, JANUARY 1963

DAY OF		A M												P M												DAILY	NO.	5-MIN
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	MEAN	OF HR	MAX
1	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
2	WED																											
3	THU																											
4	FRI																											
5	SAT																											
6	SUN																											
7	MON																											
8	TUE																											
9	WED	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
10	THU	0		0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	22	1
11	FRI	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
12	SAT	0		0	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0.1	21	1
13	SUN	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
14	MON	0		0	0	0	0	0	0	0	0	0	0	0			0	0	0	1	1	0	1	1	1	0.2	21	1
15	TUE	1		1	1							0	0	1	1	1	1	0	0	1	1	0	0	1	0	0.5	17	2
16	WED	1		0	0	0	1	1	1	1	0		1	1		1	1	1	0	0	1	1	1	1	0	0.5	21	2
17	THU	1		1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1		1	1	1	1	0.4	22	2
18	FRI	1		0	1	1	0	0	0	0				0	0	0	0	1	0	1	0	0	0	0	0	0.3	20	1
19	SAT	0		1	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	1	1	0	1	1	0.4	23	1
20	SUN	1		1	1	0	1	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	23	1
21	MON	0		1	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	1	1	1	1	1	0.2	22	1
22	TUE	1		1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	23	1
23	WED	0		1	0	1	1	1	1	1			1	1	1	1	1	1	0	0	0	0	1	0	1	0.5	21	2
24	THU	1		1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.3	23	1
25	FRI	1		1	1	0	1	1	1	0	0	0	0	0	0	0		0	0	0	0	1	1	1	1	0.4	22	1
26	SAT	1		1	1	1	0	0	1	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0.4	23	1
27	SUN	0		0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	1	1	0	0.4	23	1
28	MON	1		1	1	1	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0	1	1	1	1	0.4	23	1
29	TUE	0		1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
30	WED	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.1	23	1
31	THU	1		1	0	0	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	1	0.4	23	2
MONTHLY MEAN		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3		
NO. OF DAYS		24		24	24	23	23	23	23	23	21	20	23	23	21	23	23	23	24	24	23	24	24	24	24		531	
MAX.HRLY MEAN		1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

Note: Total oxidant data are not corrected
for sulfur dioxide interference.

TABLE 3-86 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, FEBRUARY 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI	1		1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.4	23	1
2	SAT	0		0	0	0	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0.4	23	1
3	SUN	0			1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	0.7	22	3
4	MON	1		1	1	1	1	1	0	1	0	0	0	1	1	1	1	1	0	1	0	1	1	0	0	0.5	23	2
5	TUE	0		1	1	0	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	0	1	1	0.4	23	1
6	WED																											
7	THU																											
8	FRI																											
9	SAT																											
10	SUN																											
11	MON																											
12	TUE																											
13	WED																											
14	THU																											
15	FRI																											
16	SAT																											
17	SUN																											
18	MON																											
19	TUE																											
20	WED												0	0	0	0	0	1	0	0	0	0	1	0	0	0.2	13	1
21	THU	0		1	0	0	0	0	1	0	0	0	0	0									0	0	0	0.2	15	1
22	FRI	0		1	1	0	0	0	0	0	0	0	1	0	1	1	1	1	0	1	1	0	0	0	1	0.3	23	2
23	SAT																											
24	SUN																											
25	MON	1			0	0									1	0	1	1	1	1	1	1	1	1	1	0.6	14	1
26	TUE	1		1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0.6	23	2
27	WED	2		1	1	1	1	1	1	1	0	1	0	1	0	1	1	1	1	1	1	1	1	1	1	0.8	23	2
28	THU	1		1	1	1	1	1	1	1	0	0		0	0	0	0	0	1	0	0	0	0	0	1	0.5	22	2
MONTHLY MEAN																												
NO. OF DAYS		11		9	11	11	10	10	10	10	10	10	10	11	11	11	11	11	11	11	11	11	12	12	12		247	
MAX.HRLY MEAN		2		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

Note: Total oxidant data are not corrected for sulfur dioxide interference.

TABLE 3-87 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, MARCH 1963

DAY OF MONTH	DAY OF WEEK	A M 12	1	2	3	4	5	6	7	8	9	10	11	P M 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO. OF HR	5-MIN MAX
1	FRI	0		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	2
2	SAT	0		1	1	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0.3	23	1
3	SUN	0			0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0.3	22	2
4	MON	0			0	0	0	0	0	0		1	1	1	1	1	1	1	0	0	1	1	0	1	0	0.5	21	3
5	TUE	0		1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	1	1	0.3	23	2
6	WED	0			1	1	0	0	0	0	0	0	0				0	0	0	0	0	0	0	0	0	0.2	19	2
7	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
8	FRI	0		1	1	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0.2	21	1
9	SAT	0			0	1	0	0	0	0	0	0	1	0				1	0	0	0	0	0	0	0	0.3	19	1
10	SUN	0		0	0	0	0	0	0	0	0	1	1	2	2	1	2	1	1	0	0	0	0	0	0	0.4	23	3
11	MON	0		0	0	0								0	0	0	0	0	0	0	0	1	0	0	1	0.2	16	1
12	TUE																											
13	WED												0	0	1	1	1	1	1	1	1	0	0	1	1	0.6	13	2
14	THU	1			0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	22	2
15	FRI	0		0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	1	0.2	23	3
16	SAT	1			0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	0	0.6	22	2
17	SUN	1		0	0	0	0	1	0	0	0	0	0	0	1	1	1	1	1	0	2	2	2	2	2	0.7	23	3
18	MON	2		2	2	2	0	0	0	0					0	2	2	2	1	0	0	1	0	1	0	0.9	19	3
19	TUE	0		1	2	1	0	1	1	0				1	1	1	1	1	1	1	0	1	1	1	1	0.7	20	3
20	WED	1			1	1	0	0	1	0	1	1	1	0	1		1	2	2	1	1	1	1	1	1	0.7	21	3
21	THU	1			1	1	0	0	0	0	0		0	1	0	1	1	1	0	1	0	0	1	1	1	0.5	21	1
22	FRI	1			1	1	1	1	1	1	0	0	1	1	0	0	0	1	0	0	0	0	1	1	0	0.5	22	2
23	SAT	0		1	1	1	1	0	1	1	1	1	1	1	1	2	2	1	1	1	0	0	0	1	1	0.7	23	4
24	SUN	0		1	0	1	1	0	1	0	0	0	0	3	5	4	4	4	2	1	1	1	1	1	1	1.3	23	7
25	MON	0		1	0	1	1	0	1	1	1	0		2	3	2	1	0	0	0	0	0	0	0	0	0.6	22	5
26	TUE	0			1	2	0	0	0	0	0	0	2	3	3	0	0	0	0	0	0	0	0	1	0	0.6	22	4
27	WED	1			1	1	0	0	0	0	0	1	0	1	1	2	2	2	1	1	1	0	1	1	1	0.7	22	3
28	THU	1		1	1	0	0	1	0	0	0	1	1	2	3	4	4	3	3	1	0	0	0	0	1	1.2	23	7
29	FRI	0		1	0	1	1	1	0	1	2	1	2	3	3	3	4	2	2	1	1	0	0	0	0	1.2	23	5
30	SAT	0		0	0	0	0	0	0	0	0	0	0	3	4	6	5	2	1	1	1	1	1	1	1	1.1	23	7
31	SUN	0		0	1	0	1	1	1	1	1	2	3	3	3	2	2	2	2	1	0	1	1	1	2	1.3	23	4
MONTHLY MEAN		0		0	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0.6		
NO. OF DAYS		29		18	29	29	28	28	28	28	25	25	26	28	28	27	28	29	30	30	30	30	30	30	30		643	
MAX.HRLY MEAN		2		2	2	2	1	1	1	1	2	2	3	3	5	6	5	4	3	1	2	2	2	2	2			

Note: Total oxidant data are not corrected for sulfur dioxide interference.

TABLE 3-83 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, APRIL 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON	1			2	1	0	0	0	0	0	0								0	0	0	0	0	0	0.4	15	3
2	TUE	0		0	0	0	0	0	0	0	0	0	1	4	4	5	4	4	2	1	0	0	0	0	0	1.0	23	6
3	WED	0		0	0	0	0	0	0	0	0	2	6	7	7	7	5	4	2	5	5	1	0	1	0	2.2	23	9
4	THU	0			1	2	2	1	0	0	1	1	1	1	1	2	1	1	2	1	0	0	0	0	0	0.9	22	3
5	FRI	0		1	1	1	0	0	0	0	0							3	2	1	0	0	0	0	0	0.6	17	4
6	SAT	0			0	0	0	0	0	0	0	1	1	2	3	3	3	3	2	2	1	0	1	0	0	1.0	22	4
7	SUN	0		0	0	0	0	0	0	0	0	0	0	1	2	5	6	6	4	2	3	4	4	2	2	1.9	23	8
8	MON	1			1	1	0	0	0	0	0	0	0	0	1	3	2	2	1	0	1	2	0	0	0	0.7	22	4
9	TUE	0			1	0	0	0	0	0		0	0	0						0	0	0	0	0	0	0.0	16	2
10	WED	0		0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	21	1
11	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0.1	23	1
12	FRI	0		0	0	0	0	0	0	0	0	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0.3	23	2
13	SAT	0		0	0	0	0	0	0	0	0	1	1	2	3	3	3	2	2	1	0	0	0	0	0	0.8	23	5
14	SUN	0		0	0	0	0	0	0	0	1	2	3	3	3	4	3	3	2	1	0	0	0	0	0	1.1	23	4
15	MON	0		0	0	0	0	0	0	0	0	2	2	2	3	4	4	2	3	1	0	0	0	0	0	1.0	23	5
16	TUE	0		0	0	0	0	0	0	0	1	3	3	2	3	3	3	1	0	0	0	0	0	0	0	0.8	23	4
17	WED	0			0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0.1	20	1
18	THU	0		0	0	0	0	0	0	0	0	0	1	3	3	3	3	3	3	1	0	0	0	0	0	0.9	23	5
19	FRI	0		0	0	0	0	0	0	0	0	0	2	6	6	5	4	3	1	1	2	3	1	2	1	1.6	23	8
20	SAT	3		2	1	2	5	3	2	3	3	3	3	3	3	4	3	4	5	4	2	1	1	0	0	2.6	23	6
21	SUN	0		0	0	1	1	0	0	0	4	5	6	6	7	8	7	8	6	2	1	3	4	4	2	3.2	23	9
22	MON	3		3	4	3	3	0	1	1	2				4	3	3	2	2	1	1	1	1	1	0	1.9	20	5
23	TUE	2		2	2	1	2	1	1	2	2	1	0	2	5	4	3	2	1	1	1	2	1	1	1	1.8	23	7
24	WED	2		1	2	2	1	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0.5	23	3
25	THU	0		0	0	0	0	0	0	0	0	1	2	2	3	3	4	3	3	2	0	0	0	0	0	0.9	23	5
26	FRI	0		0	0	0	0	0	0	1	1	2	4	4	3	3	4	4	3	1	0	1	0	0	0	1.3	23	6
27	SAT	0		0	0	0	0	0	0	3	3	4	6	5	6	5	5	5	4	3	1	1	0	0	0	2.2	23	7
28	SUN	0		1	1	1	1	1	2	1	2	3	4	5	5	6	6	6	6	4	3	1	2	2	2	2.7	23	8
29	MON	2			0	0	0	0	0	0	2	2	3	1	0	2	2	1	1	1	2	1	0	1	2	1.1	22	4
30	TUE	3		3	3	3	2	1	0	0	0	0	2	2	2	2	2	2	2	1	1	2	2	2	3	1.7	23	4
MONTHLY MEAN		1		1	1	1	1	0	0	0	1	1	2	2	3	3	3	3	2	1	1	1	1	0	0	1.2		
NO. OF DAYS		30		23	30	30	30	30	30	30	28	26	26	27	27	27	27	28	28	30	30	30	30	30	30		657	
MAX.HRLY MEAN		3		3	4	3	5	3	2	3	4	5	6	7	7	8	7	8	6	5	5	4	4	4	3			

Note: Total oxidant data are not corrected for sulfur dioxide interference.

TABLE 3-89 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, MAY 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	WED	2			4	3	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.5	22	4
2	THU	1		3	2	1	0	0	0	0	0	1	1	2	3	4	4	4	3	1	0	0	0	0	0	1.3	23	6
3	FRI	0			0	0	0	0	0	0	0	3	7	6	6	5	4	4	4	2	1	1	1	2	1	2.2	22	11
4	SAT	1				0	0	0	0	0	1	3	7	8	11	12	9	7	7	2	2	3	2	3	3	3.8	21	14
5	SUN	2		2	1	0	0	0	0	0	1	5	9	14	15	13	11	9	7	6	5	4	2	2	2	4.7	23	17
6	MON	2		3	3	3	0	0	1			1	2	3	6	7	8	6	7	5	5	2	3	2	2	3.3	21	9
7	TUE	1		1	2	2	0	0	2	4	5	6	7	6	7											3.3	13	8
8	WED												2	3	4	4	3	2	1	1	1	1	1	1	0	1.8	13	5
9	THU	0			0	0	0	0	0	0					5	4	4	3	3	2	1	1	1	1	0	1.4	18	6
10	FRI	0		0	0	0	0	0	0	0	2	7	5	5	6	4	3	3	2	1	0	1	0	0	0	1.7	23	8
11	SAT	1			0	0	0	0	0	0	0	1	2	3	3	3	4	4	3	2	1	0	0	1	1	1.2	22	5
12	SUN	0		1	1	1	1	1	1	1	2	2	2	3	4	5	5	6	3	1	1	0	0	0	0	1.6	23	6
13	MON	0		0	0	0	0	0	0		2	3	3	3	3	2	1	2	1	1	0	0	1	2	2	1.2	22	4
14	TUE	1		0	0	0	0	0		1	0	0	1	1	1	2	3	2	2	1	0	0	2	2	1	0.9	22	3
15	WED	2			2	1	0	0	0	0	1	2	3	3	4	4	4	4	4	3	1	1	0	0	0	1.8	22	5
16	THU	0		0	1	1	1	1	0	1	1	1	2	3	4	5	3	4	5	4	3	2	0	0	1	1.8	23	6
17	FRI	1		2	1	1	0	0	0	0	1	2	3	3	3	3	4	3	4	3	3	3	3	4	4	2.1	23	5
18	SAT	4		4	4	2	1	0	0	1	2	3	4	4	5	5	5	6	6	4	1	1	1	0	0	2.8	23	7
19	SUN	0		0	1	1	0	0	1	2	5	6	6	6	6	6	6	6	5	3	1	0	0	0	0	2.7	23	7
20	MON	1		0	0	1	1	0	0			2	3		2	1	2	3	4	2	1	0	0	1	0	1.2	20	5
21	TUE	0		0	0	0	0	0	0	0	0	1	1	3	3	3	4	3	3	2	2	1	1	1	2	1.3	23	5
22	WED	3			2	1	1	0	0	1	4	4	5	4	4	3	3	4	2	2	1	2	1	2	2	2.3	22	6
23	THU	2		2	2	1	0	0	1	2	2	2	3	2	2	3	3	3	2	2	0	0	0	0	0	1.4	23	3
24	FRI	0		0	0	0	0	0	0	0	0	3	5	8	8	10	10	9	4	3	3	2	2	1	0	3.0	23	12
25	SAT	0		0	0	0	0	0	0	1	1	4	5	7	7	7	6	7	7	6	6	5	4	3	3	3.3	23	9
26	SUN	3		3	3	2	2	1	1	1	1	3	6	7	3	5	4	1	1	0	0	2	3	3	2	2.3	23	8
27	MON	3		3	3	1	0	1	2	3	4	2	3	4	4	4	3	4	4	3	2	2	3	4	3	2.9	23	6
28	TUE	2		3	3	3	1	0	0	0	0	0	1	1	2	2	2	2	1	2	2	1	1	0	0	1.1	23	4
29	WED	0		1	0	0	0	0	0	0	0	0	0			1	1	2	2	1	0	0	0	1	2	0.5	21	3
30	THU	2		1	2	1	1	1	2	4	5	6	7	7	8	8	8	8	7	6	3	1	1	0	0	3.7	23	8
31	FRI	0		2	3	1	0	0	1	3	4	6	7	8	8	8	9	9	9	7	0	0	0	1	0	3.8	23	11
MONTHLY MEAN		1		1	1	1	0	0	0	1	2	3	4	4	5	5	5	4	4	2	1	1	1	1	1	2.2		
NO. OF DAYS		30		23	29	30	30	30	29	27	27	29	30	28	30	30	30	30	30	30	30	30	30	30	30		672	
MAX.HRLY MEAN		4		4	4	3	2	1	2	4	5	7	9	14	15	13	11	9	9	7	6	5	4	4	4			

Note: Total oxidant data are not corrected
for sulfur dioxide interference.

TABLE 3-90 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, JUNE 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SAT	0			0	0	0	0	2	5	7	8	8	8	8	6	7	7	7	6	4	4	4	3	3	4.4	22	9
2	SUN	2		2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0.4	23	4
3	MON	0		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
4	TUE	1		1	0	1	0	0	0	0	0	0	3	4	4	5	6	5	4	3	1	1	1	0	0	1.7	23	7
5	WED	0		0	0	0	0	0	0	1	2	2	1	2	3	6	7	7	5	3	1	1	0	0	0	1.8	23	8
6	THU	0		0	0	0	0	0	1	4	5	5	6	8	7	8	8	6	3	1	1	1	1	1	0	2.9	23	9
7	FRI	0		0	0	0	0	0	2	4	3	2	4	6	6	3	1	4	7	1	0	2	3	3	3	2.4	23	11
8	SAT	3		2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.5	23	4
9	SUN	1		2	1	1	1	2	1	2	3	4	3	4	8	7	7	6	6	4	3	1	0	0	1	2.9	23	9
10	MON	0		0	0	0	0	0	0	3	4	3	3	4		4	4	4	4	2	0	1	2	1	0	1.8	22	6
11	TUE	1		1	0	0	0	0	0	0	0	0	1	3						0	0	0	0	0	0	0.3	18	5
12	WED	1			0	0	0	0	0	0	0	0	1				1	0	0	0	0	0	0	0	0	0.2	19	2
13	THU	0		1	1	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	0	0	1	0	0	0.3	23	1
14	FRI	0		0	0	0	0	0	0	0	1	5	4	6	7	6	4	3	3	2	1	0	0	0	0	1.8	23	8
15	SAT	0		0	0	0	0	1	2	2	3	4	4	4	3	4	3	4	4	2	0	0	0	0	0	1.7	23	5
16	SUN	1		0	0	0	0	0	0	1	2	2	4	5	5	3	3	4	3	2	2	1	1	0	1	1.7	23	6
17	MON	0		0	0	0	0	1	2	4	6	7	6	7	10	10	11	12	12	10	6	2	1	1	1	4.7	23	13
18	TUE	1		1	1	1	1	0	1	3	4	8	11	11	10	9	9	10	9	8	5	3	1	1	2	4.8	23	12
19	WED	2		5	1	0	0	0	0	3	4	6	9	9	9	9	9	9	5	4	2	2	2	0	1	3.9	23	10
20	THU	1		1	1	0	0	0	0	1	1	4	4	4	3		2	2	2	2	1	1	1	1	0	1.5	22	6
21	FRI	0		1	2	3	2	1	0	1	1	1	2	3	3	3	4	3	3	3	2	1	0	0	0	1.6	23	5
22	SAT	0		0	0	0	0	0	1	1	3	2	4	5	5	5	5	6	5	4	3	1	1	0	0	2.3	23	7
23	SUN	0		0	0	0	0	1	3	5	6	9	12	12	12	11	12	12	10	7	4	1	0	0	0	5.1	23	14
24	MON	0		0	0	0	1	0	0	1	3	6	9	9	8	8	9	9	9	12	11					5.0	19	14
25	TUE												11	12	11	10	11	10	11	9	4	1	1	1	1	6.9	13	14
26	WED	1		1	1	0	0	0	1	6	11	17	20	21	22	16	13	12	9	8	5	3	2	2	1	7.4	23	25
27	THU	0		2	1	0	0	0	2	15	17	21	15	13	11	9	9	7	5	3	1	1	0	0	0	5.8	23	23
28	FRI	0		0	0	0	0	0	1	2	2	2	1	1	3	1	3	4	4	5	0	2	2	1	1	1.5	23	6
29	SAT	1			1	1	1	0	1	4	4	6	9	9	8	7	6	5	4	4	2	2	1	3	2	3.6	22	10
30	SUN	2		1	1	1	0	2	2	1	4	10	13	12	9	9	7	5	5	5	1	1	1	1	1	4.0	23	14
MONTHLY MEAN		1		1	1	0	0	0	1	2	3	5	6	6	6	6	6	5	5	4	2	1	1	1	1	2.7		
NO. OF DAYS		29		26	29	29	29	29	29	29	29	29	30	29	27	27	29	29	29	30	30	29	29	29	29		663	
MAX.HRLY MEAN		3		5	2	3	2	2	3	15	17	21	20	21	22	16	13	12	12	12	11	4	4	3	3			

Note: Total oxidant data are not corrected for sulfur dioxide interference.

TABLE 3.91 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, JULY 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON																											
2	TUE																											
3	WED												0	0	1	0	1	1	1	0	0	0	0	0	0	0.3	13	1
4	THU	0		1	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.5	23	1
5	FRI	0		0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.4	23	1
6	SAT	0		1	1	1	0	0	0	0	1	1	1	1	1											0.6	13	1
7	SUN																											
8	MON																											
9	TUE																											
10	WED																											
11	THU																											
12	FRI																											
13	SAT																											
14	SUN																											
15	MON																											
16	TUE																											
17	WED																											
18	THU																											
19	FRI																											
20	SAT																											
21	SUN																											
22	MON																											
23	TUE																											
24	WED											7	8	8	9	8	6	3	4	3	1	0	0	1	0	4.2	14	11
25	THU	0		0	0	0	0	0	0	1	5	9	12	8	11	10	8	7	7	4	3	1	0	0	0	3.7	23	14
26	FRI	0		0	0	0	0	0	0	6	6	6	6	7	8	7	8	9	8	4	1	0	0	0	0	3.4	23	11
27	SAT	0		0	0	0	0	0	1	3	4	6	7	7	6	6	7	6	6	4	1	1	0	0	0	2.7	23	8
28	SUN	0		1	0	0	0	0	1	2	3	5	4	6	5	3	1	0	1	3	2	1	1	0	1	1.7	23	7
29	MON	1		1	1	0	0	0	0	0	1	5		6	6	6	2	2	1	2	1	1	1	1	1	1.8	22	10
30	TUE	1		1	1	1	0	0	0	1	1	2	5	5	5	6	5	7	7	7	5	3	1	2	2	2.9	23	8
31	WED	1		1	1	0	0	0	0	0	3	4	3	4	5	7	8	5	4	3	3	3	3	3	1	2.6	23	9
MONTHLY MEAN																												
NO. OF DAYS		10		10	10	10	10	10	10	10	10	11	11	12	12	11	11	11	11	11	11	11	11	11	11	246		
MAX.HRLY MEAN		1		1	1	1	0	0	1	6	6	9	12	8	11	10	8	9	8	7	5	3	3	3	2			

Note: Total oxidant data are not corrected
for sulfur dioxide interference.

TABLE 3-92 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, AUGUST 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU	0		0	0	0	0	0	1	0	1	5	5	4	4	5	6	3	4	4	2	1	0	0	0	2.0	23	8
2	FRI	0		2	3	2	1	1	1		2	3	4	5	5	5	5	6	5	3	2	1	0	0	0	2.4	22	6
3	SAT	0		0	0	0	0	0	0	0	2	4	5	4	5	3	4	5	4	4	1	1	1	0	1	1.9	23	11
4	SUN	0		2	3	3	3	3	3	4	5	5	5	5	6	6	6	5	5	4	2	1	1	1	3	3.4	23	6
5	MON	2		2	2	2	1	0	1	1	1	2	2	3	4	4	4	3	3	2	2	0	0	0	0	1.8	23	5
6	TUE	0		2	1	0	0	0	1	3	4	5	6	6	6	7	7	6	6	5	3	0	0	1	1	3.0	23	9
7	WED	1			2	1	0	0	0	0	1	0	2	5	1	5	3	3	3	1	2	2	2	2	1	1.7	22	7
8	THU	1		0	0	0	0	0	0	2	4	5	5	6	6	6	6	5	5	4	2	1	0	0	0	2.5	23	7
9	FRI	0		0	0	0	0	0	0	2	7	5	9	8	6	7	7	6	7	5	0	0	0	0	0	3.0	23	10
10	SAT	0		3	3	3	2	2	2	3	4	5	5	5	6	6	6	5	5	6	4	2				3.7	20	6
11	SUN																											
12	MON																											
13	TUE																											
14	WED											2	2	2	2	3	2	2	2	2	0	1	0	0	0	1.4	14	3
15	THU	0		0	0	0	0	0	0	1	3	4	5	5	4	4	5	5	5	4	2	1	0	0	0	2.1	23	6
16	FRI																											
17	SAT																											
18	SUN																											
19	MON										2	7	9	6	7	8	6	7	8	8	7	6	5	4	2	6.2	15	9
20	TUE	2			2	2	1	1	1	1	3	6	13	14	18	16	15	14	8	5	5	4	2	2	1	6.2	22	19
21	WED	1			2	2	2	1									2	2	2	1	0	0	0	0	0	1.1	14	4
22	THU	0		0	0	0	0	0	0	0	0	3	7	14	13	12	7	5	3	1	0	0	0	0	0	2.8	23	16
23	FRI	0		0	0	0	0	0	0		4	6	9	9	9	8	7	7	5	2	0	0	0	0	1	3.1	22	11
24	SAT	1		0	1	1	0	0	0	1	4	4	6	5	5	4	3	2	2	1	0	0	0	0	0	1.7	23	7
25	SUN	1		0	0	0	0	0	0	1	1	1	2	3	3	4	4	4	4	3	0	0	0	0	0	1.3	23	5
26	MON	0		0	0	0	0	0	0				8	10	12	14	15	13	8	4	2	1	0	0	0	4.4	20	17
27	TUE	0		0	0	0	0	0	0	1	3	7	9	9	11	11	8	8	8	5	2	1	1	0	1	3.7	23	14
28	WED	2		2	4	2	0	0	0	1	4	2	5	8	7	6	6	8	8	5	5	4	4	3	5	4.0	23	9
29	THU	6		3	4	2	0	0	0	0	2	0	1	1	2	3	3	5	4	2	1	1	1	1	1	1.8	23	6
30	FRI	1		0	1	1	0	0	0	2	4	5	7	6	7	6	7	7	7	5	2	1	0	1	1	3.1	23	8
31	SAT	2		1	0	0	0	0	1	2	4	6	6	6	7	8	8	7	6	3	1	1	1	2	1	3.1	23	8
MONTHLY MEAN		1		1	1	1	0	0	0	1	3	4	6	6	7	7	6	6	5	3	2	1	1	1	1	2.8		
NO. OF DAYS		23		20	23	23	23	23	22	19	22	23	24	24	24	24	25	25	25	25	25	25	24	24	24		539	
MAX.HRLY MEAN		6		3	4	3	3	3	3	4	7	7	13	14	18	16	15	14	8	8	7	6	5	4	5			

Note: Total oxidant data are not corrected
for sulfur dioxide interference.

TABLE 3-93 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, SEPTEMBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	0		0	0	0	0	0	1	3	4	5	6	5	6	6	6	6	5	4	2	1	1	0	0	2.6	23	7
2	MON	0		0	0	0	0	0	1	3	6	8	7	8	9	9	8	7	7	5	4	5	4	5	5	4.4	23	10
3	TUE	4		3	5	4	1	0	0	2	1	2	4	6	6	4	6	3	4	1	2	3	2	2	4	3.1	23	9
4	WED	5		3	3	2	0			1	3	4	6	4	5	4	5	6	5	0	2	2	2	2	2	3.1	21	7
5	THU	2		0	0	0	0	0	0	0	0	1	0	0	1	2	2	2	1	1	1	0	1	0	0	0.6	23	3
6	FRI	0		0	0	0	0	0	0	0	1	3	5	5	7	6	6	7	6	4	2	0	0	0	0	2.3	23	8
7	SAT	0		1	1	0	0	0	0	0	1	6	9	10	9	10	11	9	8	7	5	4	3	3	1	4.2	23	12
8	SUN	2		2	1	2	3	1	1	4	3	4	9	9	8	8	10	9	8	3	2	2	2	2	2	4.1	23	11
9	MON	2		0	1	1	0	0	0	1	6	12	9	9	9	8	8	8	7	3	1	1	1	1	1	3.8	23	15
10	TUE	0		0	0	0	0	0	0	2	5	6	7	6	7	8	8	5	4	2	1	0	0	0	0	2.6	23	9
11	WED	0			0	0	0	0	0	0	0			8	10	10	9	8	8	5	5	5	4	2	2	3.8	20	11
12	THU	5		4	2	2	0	1	2	3	5	6	7	6	6	6	6	6	6	2	2	2	2	1	2	3.6	23	8
13	FRI	1		4	4	1	0	0	0	0	1	1	1	2	3	3	3	2	2	1	0	1	0	0	0	1.4	23	5
14	SAT	0		0	0	0	0	0	0	0	0	0	1	1	1	2	2	2	1	1	1	1	2	2	1	0.8	23	4
15	SUN	2		2	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0.5	23	3
16	MON	1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
17	TUE	0		0	1	0	0	0	0	0	1	2	2	2	2	3	2	2	1	1	0	0	0	0	0	0.8	23	3
18	WED	0		0	0	0	0	0	0	0	0	0	0	1	1	3	3	3	2	1	1	0	0	0	0	0.6	23	4
19	THU	0		0	0	0	0	0			1	2	5	5	6	6	7	6	4	1	1					2.6	17	8
20	FRI			0	0					1	1	8	14	13	11	9	6	5	3	1	1	0	0	0		4.2	17	15
21	SAT																											
22	SUN								1	2	2	2	3	4	4	5	4	4	3	1	1	1	1	0	1	2.3	17	5
23	MON	1		1	1	1			0	1	2	2	3	3	4	5	4	4	3	1						2.3	16	5
24	TUE																											
25	WED								0	0	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0.5	17	3
26	THU	0		0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	1	0	0	0	0	0	0	0.3	23	4
27	FRI	0		0	0	0	0	0	0	0			4	6	7	7	5	4	2	1	0	0	0	0	0	1.6	21	9
28	SAT	0		0	0	0	0	0	0	0	0	3	10	8	7	2	3	1	1	1	1	0	2	2	2	2.0	23	12
29	SUN	1			1	3	0	0	1	0	1	1	2	3	4	5	5	5	2	0	0	0	0	0	1	1.5	22	6
30	MON	1		1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	23	2
MONTHLY MEAN		1		1	1	1	0	0	0	1	2	3	4	5	5	5	5	4	3	2	1	1	1	1	1	2.1		
NO. OF DAYS		25		24	26	25	24	23	25	27	27	26	27	28	28	28	28	28	28	28	27	26	26	26	25		605	
MAX.HRLY MEAN		5		4	5	4	3	1	2	4	6	12	14	13	11	10	11	9	8	7	5	5	4	5	5			

Note: Total oxidant data are not corrected
for sulfur dioxide interference.

TABLE 3.94 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, OCTOBER 1963

DAY OF		A M												P M														
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO. OF HR	5-MIN MAX
1	TUE										0	0	2	4	5	5	3	3	2	1	1	0	0	1	0	1.7	15	7
2	WED	0		0	0	0	0	0	0	0	0	1	1	3	4	4	4	2	1	0	1	1	0	0	0	0.9	23	5
3	THU	0		0	0	0	0	0	0	0	1	3	4	3	2	2	3	3	2	1	1	1	0	0	0	1.1	23	5
4	FRI	0		1	0	0	0	0	0	0	1	1	1	1	2	2	2	1	0	0	0	0	0	0	0	0.5	23	3
5	SAT	0		0	0	0	0	0	0	0	1	3	5	7	10	12	9	8	6	3	1	0	0	0	0	2.7	23	14
6	SUN	0		0	0	0	0	0	0	0	0	1	4	6	5	6	4	4	2	1	1	1	1	1	1	1.6	23	7
7	MON	1		0	0	0	0	0	0	0	0	0	2	4	3	6	5	3	1	1	1	2	2	1	1	1.5	23	7
8	TUE	0			0	0	0	0	0	0	1	2	3	2	4	4	4	2	1	1	0	0	0	0	0	1.1	22	5
9	WED	0		0	1	0	0	0	0	1	2	3	3	4	5	4	3	3	1	0	0	0	0	0	0	1.2	23	6
10	THU	0		0	0	0	0	0	0	0	0	2	3	4	5	6	6	4	3	1	0	0	0	0	0	1.4	23	7
11	FRI	0		0	0	0	0	0	0	0	1	2	1	3	5	5	2	1	1	0	1	0	0	0	0	1.0	23	6
12	SAT	0		0	0	1	0	0	1	1	2	2	3	3	4	3	3	3	1	1	0	0	0	0	0	1.2	23	4
13	SUN	0		0	0	0	0	0	0	1	2	2	3	4	5	5	4	3	2	1	1	1	0	0	0	1.5	23	5
14	MON	0		0	0	0	0	0				3	4	4	2	4	3	2	1	1	0	0	0	0	0	1.2	20	6
15	TUE	0		0	1	0	0	0	0	0	0	1	2	6	8	10	4	4	4	2	1	1	1	1	1	1.9	23	12
16	WED	1		1	1	1	1	0	0	0	0	2	5	7	8	8	7	5	1	1	1	1	1	1	1	2.3	23	9
17	THU	1		1	1	1	0	0			2	4	9	10	9	8	9	4	3	2	2	2	2	2	1	3.5	21	12
18	FRI	2		1	1	1	1	0	0	0	0	1	0	0	1	6	11	11	4	2	2	1	1	1	1	2.1	23	14
19	SAT	0		0	0	0	0	1	0	1			7	10	9	6	7	5	2	1	1	1	0	0	0	2.4	21	12
20	SUN																											
21	MON																											
22	TUE			4	4	4	2	2	2	2	1					0	0	0	0	0	0	0	0	0	0	1.1	18	5
23	WED	0		0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	1	0	0	0	0	0.1	21	1
24	THU	0		0	0	0	0	0	0	0	0	1	4	4	2	4	4	3	0	0	0	0	0	0	0	1.0	23	6
25	FRI	0		0	0	0	0	0	0	0	0	0	1	5	1	1	1	0	0	0	0	0	0	0	0	0.4	23	6
26	SAT	0		0	0	0	0	0	0	0	0	0	0	1	4	4	4	2	1	1	0	0	0	0	0	0.7	23	6
27	SUN	0		0	0	0	0	0	0	0	0	0	2	6	8	6	5	2	1	1	0	0	0	0	0	1.3	23	10
28	MON	0		0	0	1	1	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	21	1
29	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	23	1
30	WED	0		0	1	0	0	0	0	0				0	0	0	0	0	0	0	0	0	0	0	0	0.1	20	1
31	THU	0		0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0.1	21	1
MONTHLY MEAN		0		0	0	0	0	0	0	0	1	1	3	4	4	4	4	3	1	1	1	0	0	0	0	1.2		
NO. OF DAYS		27		27	28	28	28	28	26	26	25	24	26	28	28	29	28	28	29	29	29	29	29	29	29		637	
MAX.HRLY MEAN		2		4	4	4	2	2	2	2	2	4	9	10	10	12	11	11	6	3	2	2	2	2	1			

Note: Total oxidant data are not corrected for sulfur dioxide interference.

TABLE 3-95 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis) WASHINGTON, NOVEMBER 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI	2			1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	22	3
2	SAT	1		0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	23	1
3	SUN	0		0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	23	2
4	MON	0		0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.2	23	2
5	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	23	1
6	WED	0		0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	1	1	1	0.2	21	1
7	THU	0		0	0	1	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.3	23	1
8	FRI	1		1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	23	1
9	SAT	0		0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0.2	23	2
10	SUN	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
11	MON	0		0	0	0	0	0	0	0	0	0	0	1	1	2	2	1	0	0	0	0	0	0	0	0.3	23	3
12	TUE.	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
13	WED	0			0	0	0	0	0	0			1	1	1	1	1	0	0	1	0	1	1	0	1	0.3	20	2
14	THU																											
15	FRI												0	1	0	0	0	0	0	0	0	0	1	1	0	0.3	13	1
16	SAT	0		0	0	1	1	0	1	1	0	1	1	1	1	0	1	1	1	1	0	0	1	1	1	0.5	23	1
17	SUN	1		1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	0.9	23	2
18	MON	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.8	23	2
19	TUE	1		1	1	1	1	1	1	0	0						1	0	0	0	1	1	1	1	0	0.6	18	2
20	WED	0			0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0.3	22	1
21	THU	0		1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.3	23	1
22	FRI	0		1	0	1	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.4	23	1
23	SAT	0			0	0	0	1	0	0	1	1	1	1	1	1	0	1	1	1	1	0	1	1	1	0.5	23	2
24	SUN																											
25	MON																											
26	TUE																											
27	WED																											
28	THU																											
29	FRI																											
30	SAT	0		0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	0	1	0	0	0	0	0.2	23	1
MONTHLY MEAN		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3		
NO. OF DAYS		22		19	22	22	22	22	22	22	20	19	22	22	22	22	23	23	23	23	23	23	23	23	23		507	
MAX.HRLY MEAN		2		1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1			

Note: Total oxidant data are not corrected for sulfur dioxide interference.

TABLE 3-96 HOURLY AVERAGES OF TOTAL OXIDANT, pphm (KI analysis)

WASHINGTON, DECEMBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	0			0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0.2	22	1
2	MON	0		0	0	0	0	0	0	0	0		0	1	1	0	1	1	1	0	0	0	0	0	0	0.2	22	1
3	TUE	0		0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.5	23	1
4	WED	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
5	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
6	FRI	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
7	SAT	0		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0.1	23	1
8	SUN	0		0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.4	23	2
9	MON	0		0	0	0	0	0	0	0	0	0	0	1	0	0		0	0	0	1	0	0	0	0	0.1	22	1
10	TUE	0		0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	1	0.5	23	1
11	WED	0			0	0	0	0	0	0		0			0	0	0	0	0	0	0	0	0	0	0	0.1	19	1
12	THU	0	0										0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	15	0
13	FRI	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
14	SAT	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.0	23	1
15	SUN	0		0	0	0	0	0	0							0	0	0	0	0	0	0	0	0	0	0.0	17	1
16	MON	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.0	23	1
17	TUE	0		0	0	0	0	0	0									0	0	0	0	0	0	0	0	0.0	15	1
18	WED	0			0	0	0	0	0	0	0	0				0	0	0	0	0	0	0	0	0	0	0.0	19	0
19	THU	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
20	FRI	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
21	SAT	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
22	SUN	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
23	MON	0		0	0	0	0	0	0	0						0	0	0	0	0	0	0	0	0	0	0.0	18	0
24	TUE	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	0
25	WED	0			0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0.1	22	1
26	THU	0		0	0	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0.0	21	1
27	FRI	0		0	0	0	0	0	0				0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	20	0
28	SAT	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	1
29	SUN	0		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.8	23	2
30	MON	1		1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	23	1
31	TUE	1		1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	23	1
MONTHLY MEAN		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1		
NO. OF DAYS		31	1	26	30	30	30	30	30	27	25	25	26	26	26	29	29	31	31	31	31	31	31	31	31		669	
MAX.HRLY MEAN		1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

Note: Total oxidant data are not corrected for sulfur dioxide interference.

TABLE 3-97 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, MARCH 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU																											
2	FRI																											
3	SAT																											
4	SUN																											
5	MON																											
6	TUE																											
7	WED																											
8	THU																											
9	FRI																											
10	SAT																											
11	SUN																											
12	MON																											
13	TUE																											
14	WED																											
15	THU																											
16	FRI																											
17	SAT																											
18	SUN																											
19	MON																											
20	TUE																											
21	WED																											
22	THU																											
23	FRI																											
24	SAT																											
25	SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	1	0	0.2	24	2
26	MON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0.1	24	3
27	TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	3	1	1	1	0	0.4	24	4
28	WED	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	1	1	2	1	0	0	0.3	22	3
29	THU	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	1	0	0	0	0	0	0	0.1	23	1
30	FRI	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1		0	0	0	0	0	0	0	0	0.1	23	2
31	SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	2
MONTHLY MEAN																												
NO. OF DAYS		7	7	7	7	7	7	7	6	6	7	6	7	7	7	7	6	7	7	7	7	7	7	7	7	164		
MAX.HRLY MEAN		0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	1	1	3	2	2	1	0			

TABLE 3-98 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, APRIL 1962

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	0
2	MON	0	0	0	0	0	0	0	0	0	0	0								0	0	0	1	0	0	0.1	17	3
3	TUE	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0.4	24	2
4	WED	3	3	3	3	2	2	4	2	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1.5	24	5
5	THU	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	24	2
6	FRI	1	1	1	1	1	1	1	2	2	1			2	1	1	1	1	1	1	1	1	1	1	1	1.1	22	2
7	SAT	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	3	4	2	1	2	2	1.4	24	5
8	SUN	2	1	1	2	2	2	1	2	1	1	1	2	1	1	1	1	1	2	2	2	2	2	2	2	1.5	24	4
9	MON	2	2	4	2	2	3	2	2	2	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1.6	24	7
10	TUE	1	1	1	1	1	1	1	1	1				1	1	1	1	2	2	2	3	3	3	2	2	1.5	21	4
11	WED	2	3	4	3	2	2	2	3	2	1	1		1	1	1	1	1	1	1	1	1	1	2	1	1.6	23	6
12	THU	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1.2	24	4
13	FRI	1	1	1	1	1	1	1	2	2	2			1	1	1	1	1	1	1	1	1	0	0	0	1.0	22	3
14	SAT	0	0	0	0	0	0	0	1	1	1	0	1	1			0	0	0	0	0	1	1	1	1	0.3	22	2
15	SUN	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	24	2
16	MON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	0
17	TUE	0	0	0	0	0	0	0	0	0				0	0	1	1	1	1	1	1	1	1	1	1	0.4	21	2
18	WED	1	1	1	1	0	0	1	1	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	0.6	24	1
19	THU	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0	1	1	1	0	1	1	1	0.7	24	2
20	FRI	1	0	0	0	0	0	1	1	1			1	1	1	1	1	1	1	1	2					0.8	18	2
21	SAT																											
22	SUN	2	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.2	24	3
23	MON	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0.9	24	2
24	TUE	0	0	0	0	1	1	1	1	0			0	0	0	0	0	1	0	1	2	3	7	6	3	1.2	22	9
25	WED	2	4	3	7	6	4	3	1			1	1	1	1	1	1	1	2	2	6	9	5	3	3	2.9	22	11
26	THU	2	1	1	1	2	2	2	3	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	24	5
27	FRI	0	0	0	0	0	1	1	1	1			0	0	0	0	0	1	1	1	1	1	1	0	1	0.5	22	2
28	SAT	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	24	2
29	SUN	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0	0.0	22	1
30	MON	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	24	5
MONTHLY MEAN		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9		
NO. OF DAYS		29	29	29	29	29	29	29	29	28	23	22	23	27	27	27	28	28	28	28	29	28	28	28	28		662	
MAX.HRLY MEAN		3	4	4	7	6	4	4	3	4	3	1	2	2	1	1	2	2	2	3	6	9	7	6	3			

TABLE 3-99 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, MAY 1962

DAY OF MONTH	DAY OF WEEK	A M 12	1	2	3	4	5	6	7	8	9	10	11	P M 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO. OF HR	5-MIN MAX
1	TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0.0	23	1
2	WED	0	0	0	0	0	0	0	0	0	0	0	0						0	0	0	0	0	0	0	0.0	19	1
3	THU	0	0	1	1	1	0	1	2	1	0	0			1	1	1	1	1	1	1	1	1	1	1	0.8	22	3
4	FRI	1	1	1	1	1	2	2	3	2								1	1	1	1	1	1	1	1	1.4	17	4
5	SAT	1	1	2	1	2	3	3	2	2	1	1	0	0	0	0	1	0	1	1	1	2	2	1	1	1.1	24	6
6	SUN	1	2	2	1	3	3	2	1	1	1	1	0	0	0	0	0	1	1	0	1	1	1	0	0	0.9	24	6
7	MON	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1	0.6	24	3
8	TUE	1	2	3	2	1	1	1	1	1	1		0	0	0	1	1	1	1	1	1	1	1	1	1	1.0	23	5
9	WED	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	2	3	0.8	24	5
10	THU	3	1	1	1	1	2	1	1	1	0	0	0	0												1.0	13	6
11	FRI																											
12	SAT	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	24	2
13	SUN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24	2
14	MON	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1.2	24	5
15	TUE	3	3	2	2	2	5	5	2	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.7	23	7
16	WED	1	0	0	1	0	1	1	1	1	0	1	0	1	0	0	1	1	1	1	1	1	1	1	1	0.7	24	4
17	THU	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	24	3
18	FRI	1	1	1	1	1	3	3	2	1		0	0	0	0	0	0	0	0	1	3	3	4	3	2	1.2	23	6
19	SAT	4	4	2	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.7	24	5
20	SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.1	24	1
21	MON	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	24	4
22	TUE	0	0	0	0	0	0	0	0	0	0	0	0									1	0	0	0	0.1	16	1
23	WED	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	24	2
24	THU	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0.4	24	5
25	FRI	0	1	1	1	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	1	3	3	3	1	1.0	24	5
26	SAT	1	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0.4	24	3
27	SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.2	24	2
28	MON	2	1	1	1	0	0	1	1	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0.4	24	3
29	TUE	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	24	1
30	WED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	0.2	24	2
31	THU	2	1	0	0	0	1	1	2	0	0	0	0	0	0	0	2	1	1	0	0	1	2	1	1	0.7	24	3
MONTHLY MEAN		1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0.7		
NO. OF DAYS		30	30	30	30	30	30	30	30	30	27	28	28	26	26	25	26	27	28	28	28	29	29	29	29		683	
MAX.HRLY MEAN		4	4	3	2	3	5	5	3	2	1	1	1	1	1	1	2	1	1	1	3	3	4	3	3			

TABLE 3-100 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, JUNE 1962

DAY OF		AM												PM														
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO. OF HR	5-MIN MAX
1	FRI	1	2	3	3	2	2	2	1	1		0	0	0	1	1	0									1.3	15	4
2	SAT																											
3	SUN																											
4	MON																											
5	TUE																											
6	WED																											
7	THU																											
8	FRI																											
9	SAT	0	0	0	0	0	1	1	1	1	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0.2	23	2
10	SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0.1	24	1
11	MON																											
12	TUE												0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	13	2
13	WED	0	0	0	0	0	0	0	0	0				0	0	0	0	0	0	0	0	0	0	0	0	0.0	21	0
14	THU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	0
15	FRI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	1
16	SAT	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	1	2	2	2	0.4	23	3
17	SUN	3	3	3	3	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	0.9	24	4
18	MON	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0.3	24	3
19	TUE	1	0	1	1	0	1	1	1	1	0	0	0		0	0	1	1	1	1	1	1	1	0	0	0.6	23	3
20	WED	0	0	0	0	0	1	2	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1		0.8	23	2
21	THU											0	0	0	0	0	0	0	0	0	1	1	2	2	4	0.8	14	7
22	FRI	5	4	1								1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.4	17	5
23	SAT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	24	2
24	SUN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.1	24	3
25	MON	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	2	2	2	1.2	23	3
26	TUE	4	5	4	4	4	4	5	6	4	2	2	2	1			1	1	1	1	1	2	3	3	2	2.9	22	7
27	WED	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	24	4
28	THU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24	2
29	FRI	1	2	2	2	1	1	2	1	1	1	1	1	1	1	1		1	1	1	1	1	2	2	2	1.2	23	2
30	SAT	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	3	1.3	24	4
MONTHLY MEAN		1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	0.8		
NO. OF DAYS		20	20	20	19	19	19	19	19	19	17	20	21	20	19	21	21	21	21	21	21	21	21	21	20		480	
MAX.HRLY MEAN		5	5	4	4	4	4	5	6	4	2	2	2	1	1	1	1	1	2	2	1	2	3	3	4			

TABLE 3.101 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, JULY 1962

DAY	OF	A M												P M												DAILY	NO.	5-MIN
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	MEAN	OF HR	MAX
1	SUN	4	3	4	2	2	2	2	1	1	0	1				1	1	1	1	1	1	1	1	1	1	1.6	21	5
2	MON	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24	4
3	TUE																											
4	WED	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	0	0	1	1	1	2	1	2	0.8	24	3
5	THU	2	2	2	1	1	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	24	4
6	FRI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1.0	23	2
7	SAT	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	2	2	1	1	1	1.0	24	4
8	SUN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24	2
9	MON																											
10	TUE	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	24	2
11	WED	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.3	24	3
12	THU	1	1	1	1	1	2	3	2	2	1	1	1	1	1			0	0	0	1	1	1	1	1	1.1	22	3
13	FRI	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	3	0.4	24	5
14	SAT	4	4	4	2	1	2	4	3	1	0	0	0	1	0	0	0	0	1	0	0	0	1	1	0	1.2	24	5
15	SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	1
16	MON	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	24	4
17	TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	1
18	WED	0	0	0	0	0	0	0	0	0	0		0	0	1	2	1	0	1	2	1	1	1	2	2	0.6	23	3
19	THU	1	1	1	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.6	24	4
20	FRI	0	0	0	1	1	2	2	2	1	0	0	0	0	0			0	0	0	0	0	0	0	0	0.4	22	3
21	SAT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	2	1	1	0	1	0.4	24	2
22	SUN	1	1	0	0	0	0	0	0	0	1	1		1	1	1	1	1	1	1	1	2	3	3	2	0.9	23	4
23	MON	2	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1.0	24	3
24	TUE	0	0	0	0	0	0	1	1	0	0	0	0	0		0		0	0	0	1	1	1	1	1	0.3	22	3
25	WED																											
26	THU																											
27	FRI	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	24	2
28	SAT	1	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	24	4
29	SUN																											
30	MON																											
31	TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	1
MONTHLY MEAN		1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	0	0	1	1	1	1	1	1	0.7		
NO. OF DAYS		25	25	25	25	25	25	25	25	25	25	24	23	24	23	23	21	25	25	25	25	25	25	25	25		588	
MAX/HRLY MEAN		4	4	4	2	2	3	4	3	2	1	1	1	1	1	2	1	1	1	2	2	2	3	3				

TABLE 3.102 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, AUGUST 1962

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	WED	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	1	0	0.3	24	4
2	THU	1	0	0	0	0	1	1	1	0	0	0	2	2	2	2	2	2	2	2	2	2	2	2	2	1.3	24	3
3	FRI	2	2	2	2	2	2	3	2	2	2	2	2	2		2	2	2	2	2	2	2	2	2	2	2.1	23	4
4	SAT	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	24	3
5	SUN	2	2	2	2	2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	2	2	2	2	2.0	23	2
6	MON	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	24	4
7	TUE	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2									2.0	16	3
8	WED																											
9	THU																											
10	FRI	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	24	4
11	SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	1
12	SUN	0	0	0	0	0	1	4	0	0	0	0		1	1	1	1	1	1	1	1	1	1	1	1	0.8	23	5
13	MON	1	1	1	1	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	24	3
14	TUE	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24	3
15	WED	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1.2	24	6
16	THU	1	1	1	1	1	1	1	2	1						0	0	0	0	0	1	1	1	0	0	0.7	19	5
17	FRI	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0.3	24	3
18	SAT	0	0	0	0	0											1	1	1	1	1	1	1	1	1	0.6	14	2
19	SUN	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	24	1
20	MON	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	0.9	24	6
21	TUE	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.2	24	4
22	WED	1	1	0	0	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.0	24	2
23	THU	1	2	2	2	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	24	3
24	FRI	1	1	1	1	1	2	2	2	1	1	1	1				1	1	1	1	1	1	1	1	1	1.1	21	3
25	SAT	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	24	3
26	SUN	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	24	2
27	MON																											
28	TUE									2	1	1	1	1	1	1	2	2	1	2	2	2	2	1	1	1.4	16	3
29	WED	1	1	1	1	1	2	2	2	1	1	0	0	0	0	0	0	1	0	1	2	2	1	1	1	1.0	24	3
30	THU	1	1	1	1	1	1	2	1	1	0	0	0	0	0	0	0	0	0	1	2	4	3	7	6	1.5	24	8
31	FRI	6	5	6	5	6	7	7	4	3	2	1	1	0	1	0		2	2	2	2	2	2	2	2	3.0	23	9
MONTHLY MEAN		1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2		
NO. OF DAYS		27	27	27	27	27	26	26	26	27	26	26	25	24	24	26	27	27	27	27	27	27	27	27	27		634	
MAX.HRLY MEAN		6	5	6	5	6	7	7	4	3	2	2	2	2	2	2	2	2	2	2	2	4	3	7	6			

TABLE 3-103 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, SEPTEMBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SAT	2	2	2	2	2	2	2	2	2	2	2			2	1	1	2	2	2	2	2	2	2	2	1.8	22	3
2	SUN	2	2	2	2	1	1	1	1	1	1	1				2	2	2	2	2	2	2	2	2	2	1.7	21	2
3	MON	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24	3
4	TUE	1	1	2	2	2	2	2	2	2	2		1	1				2	2	2	2	2	2	2	2	1.8	20	3
5	WED	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	3	3	3	3	3	2	2	2	2	2.2	24	3
6	THU	2	2	2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	2	2	2	3	3	3	2.1	23	4
7	FRI	4	4	4	4	4	4	3	3	3	2	2	2	2	2		2	2	2	2	3	3	3	3	4	2.9	23	4
8	SAT	4	5	4	4	4	5	4	4	3	3	3	2	2	2	2	2	2	2	2	2	3	3	3	3	3.1	24	5
9	SUN	3	3	2	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2.4	24	4
10	MON	2	2	2	2	2	2	3	3	2	2	2	2	2	2	2		2	2	2	3	3	3	3	3	2.4	23	3
11	TUE	2	2	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	2.4	24	3
12	WED	3	3	3	3	3	3	4	3	3	3	2	2	2	2	2	2	2	2	3	4	4	4	4	5	2.9	24	5
13	THU	6	7	6	7	8	8	7	6	5	3	3	3	3			3	3	3	3	3	3	3	3	3	4.6	22	9
14	FRI																											
15	SAT																											
16	SUN																											
17	MON																											
18	TUE	3	3	3	3	3	5	5	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.2	24	6
19	WED	3	3	3	3	3	3	4	5	4	3	3	3	3	3	3	3	3	4	3	3	3	3	3	3	3.2	24	6
20	THU	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	3	3	3.1	24	4
21	FRI	3	3	3	3	3	3	4	3	3	3	3	3		3	3	3	3	3	3	3	3	3	3	3	3.1	23	5
22	SAT	3	3	3	3	3	6	5	5	5	3	3	3	3	3				3	3	3	4	3	3	3	3.5	21	7
23	SUN	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	3	4	4	5	3.2	24	6
24	MON	5	4	3	4	5	6	6	5	4	3	3	3	3	3	3	3	3	3	4	4	4	2	2	3	3.7	24	9
25	TUE	3	3	3	3	3	3	3	3	3	3	3	2	0	2	1	3	3	3	3	3	3	3	2	2	2.6	24	5
26	WED	3	2	3	3	3	3	4	4	4	4			4	4	4	5	5	6	5	5	5	5	4	4	4.1	22	8
27	THU	4	4	4	4	4	4	5	5	5	4	5	4	4	4	4	4	4	5	4	4	4	4	4	4	4.2	24	6
28	FRI	4	4	4	4	4	4	5	5	4	4	4			4	4	5	6	5	4	4	5	6	6	6	4.6	22	7
29	SAT	5	5	5	4	4	5	5	6	4	4	4	4	4	3	4	4	4	4							4.4	18	10
30	SUN																											
MONTHLY MEAN		3	3	3	3	3	4	4	3	3	3	3	2	2	3	3	3	3	3	3	3	3	3	3	3	3.0		
NO. OF DAYS		25	25	25	25	25	25	25	25	25	25	22	21	21	22	21	22	24	25	24	24	24	24	24	24		572	
MAX.HRLY MEAN		6	7	6	7	8	8	7	6	5	4	5	4	4	4	4	5	6	6	5	5	5	6	6	6			

TABLE 3-104 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, OCTOBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON																											
2	TUE	7	8	9	8	7	9	9	9			3	6	6	6	6	7	7	7		8	7	7	7	7	7.2	21	11
3	WED																											
4	THU																											
5	FRI																											
6	SAT																											
7	SUN																											
8	MON																											
9	TUE																											
10	WED																											
11	THU		2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2					2.0	19	2
12	FRI		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	23	2
13	SAT	2	2	2	1	1	1	1	1	1						0	0	0	0	0	0	0	0	0	0	0.6	20	2
14	SUN	0									1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	16	1
15	MON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	0
16	TUE	0	0	0	0	0	0	0	0	1	1	1	1		2	2	2	2	2	2	2	2	2	2	2	1.1	23	2
17	WED	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	24	2
18	THU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24	1
19	FRI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	3	1.2	24	3
20	SAT																											
21	SUN																											
22	MON																											
23	TUE																											
24	WED																											
25	THU																											
26	FRI																											
27	SAT																											
28	SUN																											
29	MON																											
30	TUE																											
31	WED																											
MONTHLY MEAN																												
NO. OF DAYS		8	9	9	9	9	9	9	9	8	8	9	9	8	10	10	10	10	10	9	10	9	9	9	9	218		
MAX.HRLY MEAN		7	8	9	8	7	9	9	9	2	2	3	6	6	6	6	7	7	7	2	8	7	7	7	7			

TABLE 3-105 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, NOVEMBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU																											
2	FRI																											
3	SAT																											
4	SUN																											
5	MON																											
6	TUE																											
7	WED																											
8	THU																											
9	FRI																											
10	SAT																											
11	SUN																											
12	MON																											
13	TUE																											
14	WED												2	2	2	2	2	2	3	3	3	2	3	3	3	2.4	13	4
15	THU	3	2	2	2	2	2	4	7	7	4	4	3	2	2	2	3	4	6	8	9	9	7	7	8	4.5	24	10
16	FRI	10	9	5	4	3	4	6	7	8	8	5			3	3	4	5	5	6	5	6	5	4	4	5.3	22	13
17	SAT	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	3	3	3	3.2	24	5
18	SUN	4	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2.6	24	4
19	MON	2	2	2	2	2	2	2	3	3	2	2	2	2	2	2	3	3	3	3	3	3	3	2	2	2.4	24	4
20	TUE	2	2	2	2	2	2	2	3	3	3	3	3	2	2	2			3	3	2	2	2	2	2	2.3	22	4
21	WED	2	2	2	2	2	2	2	3	3	3	3	2	2	3	3		4	5	4	3	3	3	3	3	2.7	23	7
22	THU	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	24	3
23	FRI	2	2	2	2	2	2	2	3	3	2	2		2	2	2	2	3	3	3	4	3	2	2	2	2.4	23	4
24	SAT	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	3	3	2	3	3	3	3	2.3	24	3
25	SUN	3	3	3	3	3	3	2	3	3	2	2	2	2	2	2	2	2	3	3	2	2	2	2	2	2.4	24	4
26	MON	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	3	3	3	3	3	3	2	2	2.3	24	4
27	TUE	2	2	2	2	2	2	2	3	2	2	2	2	2		2	3	3	4	4	3	3	3	3	3	2.5	23	4
28	WED	3	2	2	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2.8	24	4
29	THU	3	3	3	3	3	3	3	4	3	3	3	3	2	2	3	2	3	3	4	4	3	3	4	3	3.0	24	5
30	FRI	3	3	3	3	3	3	4	5	4	3	3	3	3	3	3	3	4	6	6	6	6	7	7	13	4.4	24	15
MONTHLY MEAN		3	3	3	2	2	2	3	3	3	3	3		2	2	2		3	3	4	3	3	3	3	4	2.9		
NO. OF DAYS		16	16	16	16	16	16	16	16	16	16	16	15	16	16	17	15	16	17	17	17	17	17	17	17		390	
MAX.HRLY MEAN		10	9	5	4	3	4	6	7	8	8	5	3	3	3	3	4	5	6	8	9	9	7	7	13			

TABLE 3-106 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, DECEMBER 1962

DAY	OF	A M												P M												DAILY	NO.	5-MIN
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	MEAN	OF HR	MAX
1	SAT	13	14	14	14	17	9	14	14	5	4	3	3		3	3	3	5	9	9	5	4	5	6	8	8.0	23	20
2	SUN	10	10	12	11	11	7	3	3	3	3	3	3	2	2	2	2	3	3	3	4	3	3	3	3	4.7	24	13
3	MON	3	3	3	2	3	3	3	4	3	3	3	3	3	3	3	3	3	5	5	4	4	4	4	4	3.3	24	5
4	TUE	4	4	4	4	3	3	4	5	4	4	3	3	3	3	3										3.6	15	6
5	WED																											
6	THU																											
7	FRI																											
8	SAT																											
9	SUN																											
10	MON																											
11	TUE																											
12	WED																											
13	THU																											
14	FRI												1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	13	2
15	SAT	1	1	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	24	3
16	SUN	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2	1	1	1	1	1	1	1	1.1	24	3
17	MON	1	1	1	1	1	2	2	2	2	2	1	1	1	1	1			4	6	4	5	3	2	2	2.1	22	9
18	TUE	3	5	5	4	3	2	2	4	3	2	2	2	1	1	1	1	2	3	2	2	2	2	3	4	2.5	24	7
19	WED	4	4	4	6	5	6	7	4	3	2	1	1	2	2	2	2	3	4	5	4	5	7	6	9	3.9	24	12
20	THU	9	7	5	6	2	1	1	1	1	1	1	1	1	1	2	2		2	1	1	1	1	1	1	2.2	23	11
21	FRI	1	1	1	1	1	1	1	2	2	3	2	2	2	2	2	3	3	3	2						1.8	19	4
22	SAT																											
23	SUN																											
24	MON	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24	2
25	TUE	1	1	1	1	1	1	3	1	1	1	2	2	1	1	1	1	2	1	1	2	1	2	2	1	1.4	24	5
26	WED	1	1	1	1	1	1	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	1	1	1	1.7	24	4
27	THU	1	1	1	1	1	1	1	1	2	1	2	2	2	2	2	2	2	2	2	2	2	2	3	3	1.7	24	4
28	FRI	3	4	4	5	2	2	3	4	4	2	2	2	2	2			2	3	2						2.7	17	6
29	SAT																											
30	SUN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1.1	24	2
31	MON																											
MONTHLY MEAN		3	3	4	4	3	3	3	3	2	2	2	2	2	2	2			3	3						2.5		
NO. OF DAYS		17	17	17	17	17	17	17	17	17	17	17	18	17	18	17	15	15	17	17	15	15	15	15	15		396	
MAX.HRLY MEAN		13	14	14	14	17	9	14	14	5	4	3	3	3	3	3	3	5	9	9	5	5	7	6	9			

TABLE 3-107 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, JANUARY 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	TUE																											
2	WED																											
3	THU																											
4	FRI	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	3	3	2	2	2	2	2.1	24	4
5	SAT	2	2	3	2	2	2								2	2	2	3	3	3	3	2	3	2	2	2.3	17	7
6	SUN	2	2	2	2	2	2	2	2	3	3	3	3	2	3	2	2	2	3	4	4	7	7	5	4	3.0	24	8
7	MON	4	3	3	3	2	3	3	4	5	5	4	4	3	2	2	2	3	4	3	2	3	2	3	2	3.1	24	6
8	TUE	2	3	3	3	3	3	3	3	3	3	2	2	3	3	3	3	3	4	4	2	2	2	2	2	2.8	24	6
9	WED	3	3	3	4	3	3	3	3	4	3	3	2	2	2	2	2	3	3	3	2	2	3	3	2	2.7	24	5
10	THU	2	2	2	2	2	2	3	4	4	3	3	2	2	2	3	3	4	5	5	3	3	2	3	2	2.8	24	7
11	FRI	2	2	2	2	2	2	3	4	4	3	2	2	2	2	3	3	7	8	4	3	3	3	3	3	3.0	24	11
12	SAT	3	3	2	2	3	3	3	3	3	3	3	3			2	2	2	2	2	2	3	2	2	2	2.5	22	5
13	SUN	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.7	24	3
14	MON	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	1.8	24	4
15	TUE	2	2	2	2	2	2	2	4	4	4	4	2	2	2	2	2	3	3	3	2	2	2	2	2	2.4	24	5
16	WED	2	2	2	3	2	3	4	3	3	2	2	2	2	2	2	2	3	3	3	2	3	2	2	2	2.4	24	7
17	THU	2	2	2	2	1	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24	4
18	FRI	2	2	3	2	2	2	2	3	3	3	2	2	2												2.2	13	3
19	SAT																											
20	SUN																											
21	MON																											
22	TUE																											
23	WED																											
24	THU																											
25	FRI																											
26	SAT																											
27	SUN																											
28	MON																											
29	TUE																											
30	WED																											
31	THU																											
MONTHLY MEAN																												
NO. OF DAYS		15	15	15	15	15	15	14	14	14	14	14	14	13	13	14	14	14	14	14	14	14	14	14	14		340	
MAX.HRLY MEAN		4	3	3	4	3	3	4	4	5	5	4	4	3	3	3	3	7	8	5	4	7	7	5	4			

TABLE 3-108 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, APRIL 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON																											
2	TUE										3	3	3	3	3	3	2	3	4	5	10	7	6	6	6	4.4	15	13
3	WED	5	4	3	2	2	3	4	5	4	4	3	2	2	2	2	2	2	3	2	2	2	3	4		3.0	23	6
4	THU										2	2	2	2	2	2	2			3	4	4	3	3	3	2.7	13	4
5	FRI	3	3	3	3	3	3	4	4	4	3	3	3	3	3	3	3	4	4	4	4	5	5	5	4	3.6	24	6
6	SAT	4	4	4	7	6	9	7	6	4	3	3	3	3	3	4	3	3	4	4	4	4	4	3	3	4.2	24	10
7	SUN	3	3	3	3	3	3	3	3	4	3	4	4	3	4	4	3	3	3	3	3	3	3	3	3	3.2	24	4
8	MON	3	3	3	3	3	3	4	4	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3.1	24	5
9	TUE	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2.9	24	4
10	WED	2	2	2	2	2	2	2	3	3	2	2	2	2	2	2	2	3	3	2	3	2	3	3	3	2.3	24	3
11	THU	3	2	2	2	2	2	3	3	2	2	2	2	2	2	2		2	2	2	2	3	2	2	2	2.2	23	3
12	FRI	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24	3
13	SAT	2	2	2	2	2	2	2	2	2	1	1	2	2	2			2	2	2	2	2	2	2	2	1.9	22	3
14	SUN	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24	3
15	MON	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3					2.0	20	3
16	TUE																											
17	WED																											
18	THU											5	3	2	2	3	3	3	3	4	8	9	11	11	12	5.6	14	13
19	FRI	10	12	12	9	8	7	3	3					3	3	3	3	4	4	4	4	3	3	3	3	5.2	20	14
20	SAT	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	3.1	24	5
21	SUN	4	5	5	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	3	3	3	3.3	24	6
22	MON	3	3	3	3	3	3	3	3	3	3			3	3	3	3	3	3	3	3	3	3	3	3	3.0	22	4
23	TUE	3	3	3	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2.7	24	4
24	WED																											
25	THU																											
26	FRI																											
27	SAT																											
28	SUN																											
29	MON									3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2.9	16	4
30	TUE	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2.7	24	4
MONTHLY MEAN		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	3	3	3	3	3.0		
NO. OF DAYS		18	18	18	18	18	18	18	18	18	20	20	20	22	22	21	20	21	21	22	22	21	21	21	20		476	
MAX.HRLY MEAN		10	12	12	9	8	9	7	6	4	4	5	4	3	4	4	3	4	4	5	10	9	11	11	12			

TABLE 3-109 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, MAY 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	WED	3	2	2	2	2	2	3	3	2	2	2	2	2	3	3	3	3	3	3	3	2	3	3	3	2.5	24	3
2	THU	2	2	2	2	2	3	3	3	2	2	2	2	2	2	3	3	3	3	3	4	6	6	7	6	3.1	24	9
3	FRI	5	5	4	5	6	6	6	6	7	5	4	3	3	3	3	3	3	3	3	3	3	3	3	4	4.1	24	8
4	SAT	3	3	3	3	3	4	3	4	4	4	4	3	3	3	3	2	3	3	3	3	3	3	4	4	3.2	24	5
5	SUN	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	2.9	24	4
6	MON	3	3	3	2	2	3	3	3	3	3	3	2	3	3	3	3	3	2	2	3	3	3	3	3	2.7	24	4
7	TUE	2	3	3	2	2	3	3	3	2	2	2	2	2	2	3	3	3	3	3	3	3	2	2	3	2.5	24	3
8	WED	2	2	2	2	2	3	3	3	3	3	3	3	3	4	3	3	3	3	3	3	3	3	4	7	3.1	24	17
9	THU	5	4	4	3	3	4	5	5	4	3	3	3	3	3	3	3	3	3	3	4	5	6	9	6	3.9	24	11
10	FRI	3	3	3	3	3	3	5	4	4	3	3	3	3		3	3	3	3	3	3	3	3	3	2	3.1	23	6
11	SAT	2	2	2	2	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.3	24	3
12	SUN	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	2.2	24	3
13	MON	2	2	2	2	2	3	3	4	3	2	2	2	2	2		3	3	3	3	3	3	2	2	2	2.5	23	5
14	TUE	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2.7	24	5
15	WED	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	2.2	24	4
16	THU	3	3	3	2	2	2	4	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.3	24	4
17	FRI	2	2	2	2	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	24	3
18	SAT	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2		2	2	2	3	4	8	5	5	2.7	24	9
19	SUN	3	3	3	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	4	6	5	2.6	24	7
20	MON	3	3	2	2	2	2	3	3	3	2	2	2	2			3	3	2	3	3	3	3	3	3	2.5	22	4
21	TUE	3	4	5	4	4	4	4	3	3	3	3	3	2	2	2	3	3	3	3	3	3	3	3	2	3.1	24	5
22	WED	2	2	2	2	2	3	4	4	3	2	2	2	2	2	3	3	2	3	3	3	2	2	2	2	2.5	24	5
23	THU	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	3	3	4	3	2	2.2	24	4
24	FRI	2	2	2	2	2	3	3	2	2	2		2	2	2	2	2	2	2	2	2	2	2	3	3	2.2	23	4
25	SAT	3	3	4	4	4	5	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.5	24	5
26	SUN	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24	3
27	MON	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24	3
28	TUE	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2.2	24	5
29	WED	3	2	2	2	2	2	4	3	3	3	2	2	2	3	3	3	3	3	3	4	5	3	2	2	2.8	24	7
30	THU	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	5	6	4	3	2.5	24	8
31	FRI	3	3	2	2	2	3	3	2	2	2	2	2	2	2			2	2	2	2	3	4	6	6	2.6	22	7
MONTHLY MEAN		3	3	2	2	2	3	3	3	3	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	2.6		
NO. OF DAYS		31	31	31	31	31	31	31	31	31	31	30	31	31	29	28	30	31	31	31	31	31	31	31	31		737	
MAX.HRLY MEAN		5	5	5	5	6	6	6	6	7	5	4	3	3	4	3	3	3	3	3	4	6	8	9	7			

TABLE 3.110 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, JUNE 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SAT	6	4	4	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.5	24	6
2	SUN	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24	3
3	MON	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24	3
4	TUE	2	2	2	2	2	2	2	2	2	2	2	1	1	1	2	2	2	2	2	2	2	2	2	3	1.9	24	3
5	WED	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	4	4	2.1	24	4
6	THU	4	5	4	4	3	3	3	4	3	2	2	2	2	1	2	2	2	2	2	3	3	3	3	3	2.7	24	12
7	FRI	3	3	3	2	2	2	3	3	2	2	2	2			2	2	3	4	3	3	2	1	1	1	2.2	22	4
8	SAT	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	1.5	24	2
9	SUN	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	4	2.2	24	5
10	MON	4	3	3	2	3	5	4	4	3	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2.4	24	6
11	TUE	1	1	1	1	1	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2.0	24	4
12	WED	2	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	2	1	1	2	2	2	2	1	1.4	24	2
13	THU	1	1	1	1	1	2	2	2	2				1	1	1	1	1	1	1	1	3	3	3	2	1.5	21	4
14	FRI	2	2	1	2	2	2	2	2	1	1	1	0	0	0	1	1	1	1	1	1	1	2			1.3	22	4
15	SAT											2	2	2	2	2	2	2	2	2	3	3	3	3	3	2.3	14	3
16	SUN																											
17	MON																											
18	TUE	3	2	3	3	2	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2.3	24	4
19	WED	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.2	24	4
20	THU	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	2	2	2	2.1	24	3
21	FRI																											
22	SAT																											
23	SUN																											
24	MON																											
25	TUE																											
26	WED																											
27	THU																											
28	FRI																											
29	SAT	3	3		2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2.8	23	4
30	SUN	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	3	3	4	4	4	5	3.0	24	5
MONTHLY MEAN		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1		
NO. OF DAYS		19	19	18	19	19	19	19	19	19	18	19	19	19	19	20	20	20	20	20	20	20	20	19	19		462	
MAX.HRLY MEAN		6	5	4	4	3	5	4	4	3	3	3	3	3	3	3	3	3	4	3	3	4	4	4	5			

TABLE 3-111 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, JULY 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON	5	3	3	3	3	4	4	4	3	3	3	3	3	2	3	3	3	3	3	3	4	5	6	4	3.4	24	6
2	TUE	3	3	3	3	3	4	5	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.2	24	6
3	WED	2	2	2	3	3	4	4	3	3	3	3	2	2	2	3	2	3	2	2	3	3	3	2	2	2.6	24	4
4	THU	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	4	4	4	2.3	24	5
5	FRI	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	3	3	2	3	3	3	3	3	3	2.7	24	4
6	SAT	3	3	3	3	2	3	3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2.6	24	5
7	SUN	3	3	3	3	3	3	3	3	3	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2.4	24	3
8	MON	2	3	2	2	2	3	3	3	3	2	2	2	2	2	2	2	3	2	2	3	3	3	3	2	2.4	24	5
9	TUE	2	2	2	2	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2.3	24	4
10	WED	3	4	4	3	3	3	3	3	3	2	2	2	2	2	3	4	4	4	4	5	5	5	4	4	3.4	24	5
11	THU	4	4	4	4	4	5	5	4	4	4	4	4	4	4	4	4	4	4	5	5	6	7	5	4	4.4	24	7
12	FRI	4	4	5	6	6	7	9	9	5	5	4	4	4	4	4	4	5	4	4	4	4	5	5	6	5.0	24	10
13	SAT	6	6	6	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.4	24	7
14	SUN	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.0	24	5
15	MON	4	4	4	4	4	5	6	5	4	4	4	4				2	2	2	2	3	3	4	6	5	3,8	21	7
16	TUE	4	4	5	5	5	4	5	4	4	2	2	2	2	1	2	2	2	1	2	2	3	3	3	3	3.0	24	7
17	WED	2	2	3	3	5	6	4	3	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2.5	24	6
18	THU	1	1	1	1	1	2	2	2	2	2	1	1	1	2	2	2	2	2	2	2	2	3	3	2	1.7	24	4
19	FRI	1	1	1	1	1	2	2	2	2	1	1	1	1	1	2	2	2	2	2	2	3	2	2	2	1.7	24	3
20	SAT	3	2	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	2	2	1	1	1	1.5	24	4
21	SUN	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1.2	24	3
22	MON	2	2	1	1	2	2	2	2	1	1	1	1	1	1	2	2	1	1	2	2	1	1	1	1	1.4	24	3
23	TUE	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1.3	24	3
24	WED	2	2	2	2	2	4	4	2	2	2	2	2	2	2	1	2	1	2	2	2	2	2	2	2	1.9	24	5
25	THU	2	1	1	1	2	2	3	3	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	1.9	24	5
26	FRI	2	2	2	2	2	2	3	4	4	2	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2.0	24	4
27	SAT	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1.7	24	3
28	SUN	2	2	2	1	1	1	1	2	2	1	1	1	2	1	1	1	2	2	2	2	2	2	2	2	1.6	24	3
29	MON	2	1	1	1	1	2	3		2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	1.9	23	3
30	TUE	2	2	2	1	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24	3
31	WED	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	2	2	2	2	2	2	2	2	2	1.9	24	3
MONTHLY MEAN		3	2	3	2	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2.5		
NO. OF DAYS		31	31	31	31	31	31	31	30	31	31	31	31	30	30	30	31	31	31	31	31	31	31	31	31		740	
MAX.HRLY MEAN		6	6	6	6	6	7	9	9	5	5	4	4	4	4	4	4	5	4	5	5	6	7	6	6			

TABLE 3-112 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, AUGUST 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU	2	1	1	1	1	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	1.9	24	10
2	FRI	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	4	4	4	4	2.4	24	6
3	SAT	4	4	3	2	3	5	4	4	4	3	2	3	3	3	3	2	2	3	3	3	4	4	4	6	3.3	24	7
4	SUN	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	24	4
5	MON	2	2	2	2	2	2	3	2	2	2	2	2	2		2	2	2	2	2	2	2	2	2	2	2.1	23	3
6	TUE	2	2	2	2	2	2	3	2	2	2	2	1	2	1	2	2	2	2	2	2	2	3	2	2	2.0	24	3
7	WED	2	2	2	2	2	2	3	3	2	2	3	2	2	2	1	2	2	2	1	1	1	2	1	1	1.8	24	4
8	THU	1	1	1	1	1	2	3	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	1.4	24	6
9	FRI	3	3	2	2	2	3	4	5	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.8	24	6
10	SAT	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.3	24	3
11	SUN	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	24	2
12	MON	2	2	2	2	2	3	3			3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2.2	22	4
13	TUE	2	2	2	2	2	2	2					2	2	2	2	2	2	2	2	3	3	4	3	2	2.2	20	4
14	WED	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24	2
15	THU	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2										2.1	15	5
16	FRI																											
17	SAT																											
18	SUN																											
19	MON																											
20	TUE																											
21	WED																											
22	THU																											
23	FRI																											
24	SAT																											
25	SUN									2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	4	2.2	16	5
26	MON	4	3	2	2	2					2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2.2	20	5
27	TUE	3	4	3					3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	2.4	20	4
28	WED	2	2	2	2	2	2	2	2	2	2	2	2	2			2	2	2	2	2	2	2	2	2	2.0	22	3
29	THU	2	2	2	2	2	2	2	2	2	2	3	3	3	2	2	3	3	2	3	3	4	3	4	3	2.6	24	5
30	FRI	3	2	3	2	2	3	4			1	1	1	1	1	1	1	1	1	2	3	4	4	5	2	2.2	22	6
31	SAT	2	2	2	3	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1					1.4	20	3
MONTHLY MEAN		2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0		
NO. OF DAYS		21	21	21	20	20	19	19	17	18	21	21	22	22	20	21	21	21	21	21	21	20	20	20	20		488	
MAX.HRLY MEAN		4	4	3	3	3	5	4	5	4	3	3	3	3	3	3	3	3	3	3	3	4	4	5	6			

TABLE 3-113 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionzation analysis) WASHINGTON, SEPTEMBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN												1	1	1	1	1	1	1	1	1	3	4	4	3	1.8	13	5
2	MON	3	4	4	6	6	7	7	2	2	3	3	3	2	2	2	2	2	2	3	3	3	2	3	2	3.3	24	7
3	TUE	3	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	2	2.7	24	3
4	WED	2	2	3	2	2	3	3	3	3	3	3	2	2	2	3	3	2	3	3	2	2	2	2	2	2.5	24	6
5	THU	2	2	2	2	2	2	3	3	2	2	2		2	2	2	2	2	2	2	2	2	2	2	2	2.1	23	3
6	FRI																											
7	SAT																											
8	SUN																											
9	MON																											
10	TUE																											
11	WED																											
12	THU																											
13	FRI																											
14	SAT																											
15	SUN																											
16	MON																											
17	TUE																											
18	WED																											
19	THU																											
20	FRI																											
21	SAT																											
22	SUN																											
23	MON																											
24	TUE																											
25	WED																											
26	THU																											
27	FRI																											
28	SAT																											
29	SUN																											
30	MON																											
MONTHLY MEAN																												
NO. OF DAYS		4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	108		
MAX.HRLY MEAN		3	4	4	6	6	7	7	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	3			

TABLE 3-114 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, OCTOBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	TUE																											
2	WED																											
3	THU																											
4	FRI																											
5	SAT																											
6	SUN																											
7	MON																											
8	TUE																											
9	WED																											
10	THU																											
11	FRI																											
12	SAT																											
13	SUN																											
14	MON																											
15	TUE																											
16	WED																											
17	THU																											
18	FRI																											
19	SAT																											
20	SUN																											
21	MON											4	4	4	4	3	3	4	5	6	5	7	6	4	3	4.4	14	9
22	TUE	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	24	4
23	WED																											
24	THU																											
25	FRI																											
26	SAT																											
27	SUN																											
28	MON																											
29	TUE																											
30	WED	3	3	3	2	2	2	2	3	3	3	3	3	2	2	3	3	3	3	3	3	3	3	3	3	2.7	24	3
31	THU	3	3	3	2	2	3	3	4	4	3			3	3	3	3	3	3	3	3	3	3	3	3	3.0	22	4
MONTHLY MEAN																												
NO. OF DAYS		3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4		84	
MAX.HRLY MEAN		3	3	3	3	3	3	3	4	4	3	4	4	4	4	3	3	4	5	6	5	7	6	4	3			

TABLE 3.115 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, NOVEMBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI	2	2	3	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	3	3	3	3	3	3	3.0	24	5
2	SAT	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24	3
3	SUN	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	4	3	4	2.4	24	4
4	MON	4	4	4	4	3	3	4	4	4	3	3	2	3	2	3	3	3	3	3	3	3	3	2	2	3.1	24	5
5	TUE	3	2	2	3	2	2	3	3	3	3	3	3	3	3	3	3	3	4	3	3	3	4	4	4	3.0	24	4
6	WED	3	3	3	3		3	3	3	3	3	3	2	2	2	2	2	2	2	2	1	1	1	1	1	2.3	23	4
7	THU	2	2	2	2	2	2	2	2	2	2	2	2	2	2			2	2	2	2	2	2	2	2	1.9	22	3
8	FRI	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24	3
9	SAT	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2.0	24	5
10	SUN	4	5	6	4	5	5	5	7	2	2	2	2	2	2	2	1	2	2	2	2	3	2	2	2	3.0	24	10
11	MON	2	2	2	2	2	2	3	2	2	2	1	3	3	3	3	3	3	5	7	7	6	4	4	3	3.1	24	9
12	TUE	3	4	4	3	3	3	3	4	4	3	3	3	3	3	3	3	3	4	4	4	5	6	6	6	3.7	24	7
13	WED	6	4	5	9	5	4	6	9	8	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4.3	24	12
14	THU	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	24	4
15	FRI	3	3	3	3	2	3	3	3	3	3	2	2	2	2	2	3	3	3	3	3	4	4	5	5	3.0	24	6
16	SAT	5	4	3	4	3	3	3	3	3	3	3	3	2	2	3	3	3	3	3	3	3	3	3	3	3.1	24	6
17	SUN	3	3	3	4	4	3	3	3	3	2	2	2	2	2	2	3	3	3	3	3	3	2	2	2	2.7	24	4
18	MON	2	2	2	2	2	2	3	3	3	3	3	3	3		3	3	4	4	3	3	3	4	3	2	2.7	23	5
19	TUE	2	2	2	2	2	2	3	3	3	3	3	2	2	2	3	3	3	3	4	4	4	4	5	6	3.0	24	6
20	WED	5	3	3	3	3	3	6	6	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.5	24	7
21	THU	3	3	3	3	3	3	3	4	4	3	3	3	3	3	3	4	4	5	6	4	4	4	4	5	3.7	24	6
22	FRI	12	11	9	7	7	7	7	9	8	7	6	5	4	4	4	5	4	4	4	4	4	4	4	3	5.9	24	14
23	SAT	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4	3.7	24	5
24	SUN	4	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3.8	24	5
25	MON	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	4	4	4	4	4.2	24	6
26	TUE	4	4	4	4	4	4	5	5	5			4	5	4	5	5	5	5	5	5	4	4	4	4	4.4	22	6
27	WED	4	4	4	4	4	4	5	5	6	6	5	5	4	4	4	5	6	7	8	11	12	11	13	15	6.5	24	20
28	THU	12	11	12	12	9							3	3	3	3	3	3	3	4	4	4	4	4	3	5.5	18	14
29	FRI	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2.8	24	3
30	SAT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1.1	24	2
MONTHLY MEAN		4	3	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	3.3		
NO. OF DAYS		30	30	30	30	29	29	29	29	29	28	28	30	30	29	29	29	30	30	30	30	30	30	30	30		708	
MAX.HRLY MEAN		12	11	12	12	9	7	7	9	8	7	6	5	5	4	5	5	6	7	8	11	12	11	13	15			

TABLE 3-116 HOURLY AVERAGES OF TOTAL HYDROCARBON, ppm C atom (flame ionization analysis) WASHINGTON, DECEMBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	4	4	4	4	5	5	5	5	5	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	4.4	24	6
2	MON																											
3	TUE												8	9	8	8	8	8	7	7	7	6	6	6	6	7.2	13	9
4	WED	6	6	6	6	5	5	6	6	6	6	5	5	5	5	6	5	6	5	5	6	6	5	5	5	5.5	24	7
5	THU	5	5	5	5	5	5	5	6	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5.0	24	7
6	FRI	4	4	4	4	4	4	5	5	5	4	4	4	4	4	4	4	4	5	5	4	5	5	5	6	4.4	24	6
7	SAT	6	6	5	7	8	6	6	6	6	4	3	3	3	3	3	3	3	4	4	4	4	4	4	3	4.4	24	10
8	SUN	5	5	6	5	4	5	3	3	3	3	3	2	2	3	3	3	3	3	3	3	2	2	2	2	3.3	24	7
9	MON	2	2	2	2	2	2	3	3	3	3	2	2	2	2	2			3	2	2	2	2	2	2	2.2	22	3
10	TUE	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	24	3
11	WED	2	2	2	2	2	2	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	2.7	24	3
12	THU	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	5	4	4	3.2	24	5
13	FRI	4	4	4	4	4	4	4	5	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.5	24	5
14	SAT	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	24	4
15	SUN	3	3	3	3	3	3	3	3	2	2	2	2	2	2	3	2	2	3	3	3	2	3	3	2	2.6	24	3
16	MON	2	2	2	2	3	3	3	3	3	3	3	3	3			3	3	3	3	3	3	3	3	3	2.8	22	4
17	TUE	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	3	3	3	3.0	24	5
18	WED	3	3	3	3	3	3	3	3	3	3	3	3	3	3	5	3	3	3	3	3	3	3	3	3	3.1	24	6
19	THU	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	24	3
20	FRI	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	24	4
21	SAT	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	24	3
22	SUN	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	3.1	24	4
23	MON	4	4	4	4	4	3	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3.4	24	5
24	TUE	3	3	3	3	3	3	3	3	4	4	4	3	3	3	3	3	4	4	3	3	3	3	4	3	3.3	24	4
25	WED	3	3	4	4	4	4	3		3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	3.3	23	5
26	THU	4	5	4	4	4	4	4	4	4	3	3	3	3	3	4	3	4	3	3	4	4	5	7	9	4.1	24	10
27	FRI	11	12	5	4	4	5	6	6	5	4	4	4	3	3			3	3	3	3	3	3	3	4	4.5	22	14
28	SAT	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.1	24	5
29	SUN	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	24	4
30	MON	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	3.1	24	4
31	TUE	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.4	24	5
MONTHLY MEAN		4	4	4	4	4	3	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	3.5		
NO. OF DAYS		29	29	29	29	29	29	29	28	29	29	29	30	30	29	28	28	29	30	30	30	30	30	30	30		702	
MAX.HRLY MEAN		11	12	6	7	8	6	6	6	6	6	5	8	9	8	8	8	8	7	7	7	6	6	7	9			

TABLE 3-117 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, APRIL 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN																											
2	MON																											
3	TUE																											
4	WED																											
5	THU																											
6	FRI	0	0	0	0	0	0	1	1	2	1				3	2	3	3	2	1	2	2	2	2	2	1.3	21	5
7	SAT	2	1	1	1	0	0	0	0	2	3	2	2	2	2	1	2	4	6	8	12	5	2	3	3	2.7	24	16
8	SUN	3	2	2	2	2	2	2	1	0	1	3	2	2	2	2	2	2	4	6	5	4	4	6	4	2.7	24	9
9	MON	4	3	2	1	1	1	3	4	6	4	3	3	2	2	3	3	4	3	2	2	2	2	2	2	2.6	24	9
10	TUE	1	1	1	1	1	1	3	2	3			2	2	3	3	4	3	4	5	6	5	7	4	3	2.9	22	8
11	WED	3	2	5	3	2	3	3	4	4	2	2		2	3	2	2	2	3	2	2	2	2	2	2	2.5	23	7
12	THU	1	1	1	1	1	1	2	3	3	2	3	3	2	3	3	3	4	2	3	2	2	2	2	2	2.1	24	6
13	FRI	1	1	1	1	1	1	2	3	4			6	3	3	3	3	4	4	4	3	3	2	2	2	2.5	22	7
14	SAT	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3	3	3	3	4	4	5	4	5	2.5	24	7
15	SUN	4	3	2	2	2	2	2	1	2	2	2	3	3	3	3	3	3	2	3	3	3	2	2	2	2.4	24	6
16	MON	1	2	1	1	2	2	3	3	3	3	3	3	3	4	3	3	4	4	4	4	3	3	3	3	2.9	24	6
17	TUE	2	2	2	2	2	2	3	4	3				3	3	3	3	4	5	3	5	4	3	5	5	3.2	21	8
18	WED	3	3	3	2	1	1	3	3	3	2	2	2	3	3	4	4	4		4	5	4	4	4	4	3.2	23	10
19	THU	3	4	3	2	2	3	5	4	4	2	2	3	3	3	3	3	3	3	3	4	3	3	3	3	3.1	24	8
20	FRI	3	2	2	3	3	3	4	5	5			3	3	2	3	4	7	5	5	8	6	6	4	4	4.1	22	11
21	SAT	3	2	2	1	1	2	2	2	2	2	2	2	1	2	2	2	1	2	3	6	9	7	6	5	2.9	24	13
22	SUN	4	2	1	1	2	1	2	2	2	2	2	2	2	3	2	3	3	3	3	4	6	9	11	6	3.3	24	13
23	MON	5	3	2	2	1	2	3	5	5	1	2	2	2	2	2	2	3	3	3	3	3	3	3	2	2.6	24	9
24	TUE	2	2	2	2	2	3	4	4	3			2	2	2	2	3	3	3	4	7	10	14	12	7	4.3	22	17
25	WED	5	6	5	9	7	5	4	5	5	3	3	3	3	3	2	3	3	5	5	17	20	10	7	7	6.0	24	26
26	THU	4	3	3	3	3	4	6	9	10	7	4	3	3	3	3	3	4	5	4	3	3	4	4	3	4.1	24	12
27	FRI	2	2	2	2	2	2	4	5	5			1	1	1	1	2	3	4	3	3	3	3	2	3	2.5	22	6
28	SAT	3	2	1	1	0	1	1	2	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	1.5	24	3
29	SUN	2	1	1	1	1	1	1	1	2	2	2	2			2	3	3	3	2	2	2	2	2	2	1.8	22	4
30	MON	2	2	2	2	2	2	3	5	6	5	3	3	3	3	4	3	3	3	4	3	4	4	3	3	3.2	24	8
MONTHLY MEAN		3	2	2	2	2	2	3	3	3	3	2	2	2	3	3	3	3	3	3	5	5	4	4	3	2.9		
NO. OF DAYS		25	25	25	25	25	25	25	25	25	19	18	22	23	24	25	25	25	24	25	25	25	25	25	25	580		
MAX.HRLY MEAN		5	6	5	9	7	5	6	9	10	7	4	6	3	4	4	4	7	6	8	17	20	14	12	7			

TABLE 3-118 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, MAY 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	TUE	4	3	3	3	3	4	5	5	5	5	4	5	5	5			5	5	5	4	4	5	5	5	4.3	22	6
2	WED																											
3	THU																											
4	FRI																											
5	SAT																											
6	SUN																											
7	MON																											
8	TUE																											
9	WED																											
10	THU																											
11	FRI																											
12	SAT																											
13	SUN																											
14	MON																											
15	TUE																											
16	WED																											
17	THU																											
18	FRI																											
19	SAT																											
20	SUN																											
21	MON																											
22	TUE																											
23	WED																											
24	THU																											
25	FRI																											
26	SAT																											
27	SUN																											
28	MON																											
29	TUE																											
30	WED																											
31	THU																											
MONTHLY MEAN																												
NO. OF DAYS		1	1	1	1	1	1	1	1	1	1	1	1	1	1			1	1	1	1	1	1	1	1		22	
MAX.HRLY MEAN		4	3	3	3	3	4	5	5	5	5	4	5	5	5			5	5	5	4	4	5	5	5			

TABLE 3-119 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, JUNE 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI																											
2	SAT																											
3	SUN																											
4	MON																											
5	TUE																											
6	WED																											
7	THU																											
8	FRI																											
9	SAT																											
10	SUN																											
11	MON																											
12	TUE																											
13	WED																											
14	THU																											
15	FRI																											
16	SAT																											
17	SUN																											
18	MON																											
19	TUE																											
20	WED																											
21	THU																											
22	FRI																											
23	SAT																											
24	SUN																											
25	MON																											
26	TUE																											
27	WED																											
28	THU	4	4	4	4	4	5	6	6	5	4			4	4	4	4	4	4	4	4	5	5	4	5	4.4	22	7
29	FRI	4	5	5	5	4	5	6	6	5	5	4				6	5	5	5	5	5	6	6	6	6	5.1	21	11
30	SAT	6	6	6	5	5	5	5	5	5	5	5	5	4	5	5	5	5	5	5	5	7	6	7	9	5.4	24	10
MONTHLY MEAN																											67	
NO. OF DAYS		3	3	3	3	3	3	3	3	3	3	2	1	2	2	3	3	3	3	3	3	3	3	3	3			
MAX.HRLY MEAN		6	6	6	5	5	5	6	6	5	5	5	5	4	5	6	5	5	5	5	5	7	6	7	9			

TABLE 3-120 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, JULY 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	9	9	9	7	7	7	7						8	5	4	4	4	4	4	5	5	5	4	4	5.9	19	10
2	MON	4	4	3	3	3	4	4	4	4	4		5	4	4	4	4	5	5	5	5	5	5	4	4	4.1	23	5
3	TUE	4	4	4	4	4	5	6	6	6	6	5	6	5	5	6	6									5.1	16	9
4	WED																											
5	THU	6	6	6	6	5	6	7	9	6	5	5	5	4	4	4	4	4	4	4	5	5	5	5	5	5.2	24	10
6	FRI	4	4	4	4	4	5	5	6	5	5	5	5	5		7	7	8	8	7	7	8	7	7	7	5.8	23	9
7	SAT	7	6	6	5	5	5	6	6	5	6	5	5		9	8	8	8	8	8	8	8	8	8	8	6.7	23	9
8	SUN	8	7	7	7	7	7	7	7	6	7	6	7	7	6	6	6	6	6	6	6	6	6	6	5	6.5	24	8
9	MON	5	5	5	5	5	5	7	7	7	7	7	6	5		9	9	9	9	9	10	9	9	9	8	7.3	23	11
10	TUE	8	8	8	7	8	8	9	9	9	8	8	8	8	8	8	8	8	8	9	9	9	10	9	9	8.4	24	11
11	WED	8	8	8	8	8	10	11	10	8	8		11	11	11	11	12	12	11	11	12	13	13	13	12	10.4	23	14
12	THU	11	11	11	11	11	12	16	15	15	13	12	12	12	12	12		12	12	13	13	14	14	14	13	12.6	23	19
13	FRI	12	12	11	10	10	12						9	10	9	10	10	10	10	11	12	14	14	17	17	11.6	19	20
14	SAT																											
15	SUN																											
16	MON																											
17	TUE																											
18	WED																											
19	THU																											
20	FRI																											
21	SAT																											
22	SUN																											
23	MON																											
24	TUE																											
25	WED																											
26	THU																											
27	FRI																											
28	SAT																											
29	SUN																											
30	MON																											
31	TUE																											
MONTHLY MEAN																												
NO. OF DAYS		12	12	12	12	12	12	11	10	10	10	8	11	11	10	12	11	11	11	11	11	11	11	11	11		264	
MAX.HRLY MEAN		12	12	11	11	11	12	16	15	15	13	12	12	12	12	12	12	12	12	13	13	14	14	17	17			

TABLE 3-121 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, AUGUST 1962

DAY OF		A M												P M														
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO. OF HR	5-MIN MAX
1	WED																											
2	THU																											
3	FRI																											
4	SAT																											
5	SUN																											
6	MON																											
7	TUE	7	7	7	7	7	8	10	10	10	8	9	8	8	8	7	9	10						2	3	7.6	19	12
8	WED	3	2	2	2	2	5	7	5	4	3	3	2	2	2	3	3	3	3	3	4	4	3	3	3	3.1	24	9
9	THU	3	2	2	2	2	4	5	4	6	5	6	4	4	4	3	3	3	3	3	3	3	2	2	3	3.3	24	7
10	FRI	5	6	7	4	8	4	4	3	3	5	6	7	8	11	5	9	5	3	3	4	4	6	11	10	5.8	24	16
11	SAT	5	3	3	2	2	3	4	3	3	3	3	3	2	3	2	2	2	2	2	4	4	3	4	4	2.9	24	12
12	SUN	4	3	3	3	3	4	6	3	2	2	2	3	3	3	3	3	2	2	2	3	3	3	3	2	2.9	24	7
13	MON	2	2	2	2	2	3	5	5	3	3	3	3	3	3	3	4	4	2	2	2	3	3	2	2	2.9	24	8
14	TUE	2	2	2	2	2	5	6	5	3	3	3	2			2	3	3	3	2	3	2	2	2	2	2.8	22	9
15	WED	2	1	1	1	2	3	6	4	2	1	2	2	2	2	2	2	3	2	3	4	3	3	3	2	2.3	24	9
16	THU	2	1	1	1	1	3	4	6	3	2	2	2	2	1	2	3	4	3	3	4	5	4	3	2	2.7	24	12
17	FRI	2	2	1	2	2	4	8	8	3	4	3	3	2	3	4	3	4	3	3	5	5	5	5	3	3.5	24	11
18	SAT	3	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	3	2	3	3	3	3	2.2	24	5
19	SUN	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2.0	24	4
20	MON	2	2	2	2	2	3	5	5	4	3	3	3	3		4	5	4	3	4	4	4	4	3	2	3.3	23	8
21	TUE	2	2	2	2	3	4	6	6	5	4	3	3	4	4	3	3	3	3	3	3	4	4	2	2	3.2	24	8
22	WED	2	2	1	1	1	3	3	3	2	2	2	1	2	2	1	1	2	1	1	1	2	1	2	2	1.7	24	6
23	THU	1	1	1	1	1	2	3	3	1	1	1	2	2	4	1	1	1	1	1	2	2	1	2	2	1.5	24	13
24	FRI	3	0	0	0	0	2	3	3	0	0	0	0	0	1	2	4	5	1	1	1	5	2	0	2	1.4	24	10
25	SAT	1	0	0	1	1	1	1	4	3	3	4	2	3	3	1	3	3	5	5	6	3	1	2	3	2.4	24	13
26	SUN	2	0	0	1	1	0	0	1	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	24	10
27	MON	5	9	7	7	10	9	9	9	7	7	8				5	11	6	7	4	4	4	4	4	4	6.6	21	17
28	TUE	5	12	9	10	8	11	10	10	6	5	4	5	5	5	5	11	8	6	7	8	6	7	6	4	7.2	24	17
29	WED	4	5	4	4	4	7	7	8	10	5	4	4	5	4	5	5	5	5	7	9	9	7	7	7	5.8	24	16
30	THU	5	5	4	4	5	7	10	9	7	5	5	4	5	5	5	5	5	5	8	11	12	14	21	16	7.5	24	24
31	FRI	15	13	12	12	12	14	17	12	11	9	7	7	6	5	6	5	7	7	6	7	7	7	6	6	8.9	24	20
MONTHLY MEAN		3	3	3	3	3	4	6	5	4	3	3	3	3	3	3	4	4	3	3	4	4	4	4	4	3.7		
NO. OF DAYS		25	25	25	25	25	25	25	25	25	25	25	24	23	22	25	25	25	24	24	24	24	24	25	25		589	
MAX.HRLY MEAN		15	13	12	12	12	14	17	12	11	9	9	8	8	11	7	11	10	7	8	11	12	14	21	16			

TABLE 3-122 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, SEPTEMBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SAT	5	6	5	5	2	3	3	4	4	4	4	3	3	3	2	2	3	4	4	5	5	5	4	4	3.8	24	8
2	SUN	3	3	3	3	2	2	2	2	3	3	3	2	2	2	2	2	3	2	3	3	3	3	3	3	2.6	24	6
3	MON	2	2	2	2	2	3	3	3	3	3	3	4	3	3	3	3	3	3	4	4	4	4	3	3	3.1	24	6
4	TUE	3	3	3	3	3	4	5	5	4	4	4	4	4			10	10	8	9	8	8	8	8	7	5.6	22	14
5	WED	7	7	7	7	7	8	10	11	10	9	8	8	8	8	9	10	12	9	9	8	8	7	6	6	8.3	24	18
6	THU	5	5	5	5	5	6	8	7	6	6	6	5	5	5	5	5	5	5	5	6	6	7	9	9	5.9	24	11
7	FRI	10	9	9	9	9	7	7	9	7	5	5	4	5	4	4	5	5	5	6	7	8	9	10	12	7.1	24	15
8	SAT	12	12	9	9	8	10	10	9	7	6	5	4	4	4	5	5	4	5	5	4	4	5	4	4	6.4	24	14
9	SUN	3	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3.8	24	6
10	MON	3	3	3	3	3	4	6	6	5	4	4	4	4	4	4	4	5	4	5	5	3	3	3	3	4.0	24	9
11	TUE	2	2	2	2	2	4	5	5	3	3	3	3	3		4	5	4	4	5	5	4	4	4	4	3.4	23	8
12	WED																											
13	THU																											
14	FRI																											
15	SAT																											
16	SUN																											
17	MON																											
18	TUE																											
19	WED																											
20	THU	8	7	7	7		9	15	16	9	8	7	7	7	7	8	8	8	8	9	10	9	9	8	8	8.6	24	20
21	FRI	7	7	6	7	8	9	10	9	7	7	6	7	7	7	8	8	8	8	8	8	7	8	8	8	7.6	24	12
22	SAT	7	7	7	7	7	11	10	10	12	8	7	7	7	7	7	7	7	8	8	8	7	7	7	7	7.8	24	14
23	SUN	6	6	6	6	6	6	6	6	6	7	7	7	7	6	7	7	7	7	8	8	8	8	10	15	7.2	24	19
24	MON	10	8	8	7	8	12	16	15	10	11	9	10	9	8	8	9	9	8	9	9	9	8	7	7	9.3	24	20
25	TUE	7	10	6	6	6	7	10	10	8	8	9	8	7	8	9	12	11	11	10	9	9	11	8	8	8.6	24	16
26	WED	6	6	7	7	7	9	11	13	10	9	11	10	10	10	10	8	8	10	9	8	8	12	9	11	9.0	24	16
27	THU	10	10	10	8	8	7	7	6	5	5	5	5	6			7	6	6	7	5	5			10	6.9	20	13
28	FRI	11	12	15	10	10	9	9	8	7	7	7	7	7	9	15	13	10	9	8	8	8	9	9	12	9.4	24	23
29	SAT	13	13	11	10	10	14	13	11	11	11	10	9	7	8	10	12	9	9	9	8	7	7	7	8	9.7	24	21
30	SUN	8	8	8	8	8	8	8	18	19	19	19	19	18	19	21	22	23	24	24	18	6	5	5	5	14.1	24	24
MONTHLY MEAN		7	7	6	6	6	7	8	9	7	7	7	6	6	7	7	8	7	7	8	7	6	7	6	7	6.9		
NO. OF DAYS		22	22	22	22	22	22	22	22	22	22	22	22	22	19	20	22	22	22	22	22	22	21	21	22		521	
MAX.HRLY MEAN		13	13	15	10	10	14	16	18	19	19	19	19	18	19	21	22	23	24	24	18	9	12	10	15			

TABLE 3-123 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, OCTOBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON	5	5	5	5	4	3	2	12	18	17	15	14	13	12	16	23	16	13	11	9	6	6	7	7	10.1	24	23
2	TUE	6	6	6	7	7	6	10	13	13	13	13	12	12	13	10	10	11	11	11	6	5	5	6	7	9.1	24	13
3	WED	5	7	8	8	8	7	7	6	6	6	0	0	3	3	4	3	0	0	0	0	0	3	5	5	3.8	24	8
4	THU	4	1	1	3	4	4	5	5	3	4	7	0	0	0	1	0	0	1	3	2	2	2	3	3	2.4	24	9
5	FRI	4	4	5	1	0	0	1	1	1	1	1	1	2	2											1.6	14	5
6	SAT																											
7	SUN	0	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0	0	0	2	4	6	11	19	12	2.5	24	21
8	MON	13	11	7	5	6	11	12	11	8	7	5	5	5	5	5	6	5	5	5	5	5	4	4	4	6.7	24	21
9	TUE	3	3	3	3	4	8	9	11	7	4	3	3	6	8	7	7	8	8	5	5	4	3	2	1	5.1	24	15
10	WED	1	1	0	1	1	4	6	4	3	1	10	9	9	9	9	10	10	14	17	24	22	18	17	20	9.1	24	30
11	THU	16	12	11	13	11	13	15	15	12	11	10	9	9	9	10	11	12	10	10	11	15	16	16	13	12.0	24	24
12	FRI	7	6	7	7	6	9	13	14	11	11	11	8	7	7	7		10	11	14	13	13	14	14	14	10.2	23	21
13	SAT	8	7	6	5	6	9	6	5	5	6	7	6	4	4	4	5	5	6	6	8	9	10	9	9	6.5	24	19
14	SUN	9	8	7	6	6	6	5	5	5	5	5	4	5				8	9	9	9	8	8	7	7	6.6	21	16
15	MON	6	7	7	7	7	9	11	11	9	8	8	7	7	7	7	8	8	14	9	7	6	6	6	6	7.7	24	18
16	TUE																											
17	WED																											
18	THU																											
19	FRI												7	9	8	8	7	8	9	11	16	23	23	15	12	12.0	13	29
20	SAT	13	20	17	11	11	12	14	11	9	7	6	7	6	5	6	10	6	8	9	9	8	7	7	7	9.3	24	30
21	SUN	5	5	5	4	4	4	4	5	5	6	10	9	7	7	6	5	5	5	5	4	4	4	4	4	5.3	24	16
22	MON	4	4	3	3	5	7	9	8	6	5	5	5	5	5	5	6	6	5	5	6	6	5	4	4	5.1	24	11
23	TUE	3	3	3	3	3	5	6	7	5	5	5	4	4	4	4	4	5	4	4	3	3	4	3	4	4.1	24	9
24	WED	3	3	3	3	6	5	6	6	5	4	3	3	3	4	4	5	7	5	5	4	4	4	4	3	4.2	24	13
25	THU	3	3	3	3	4	6	11	11	7	5	5	5	4	4	5	7	6	5	5	6	6	5	4	3	5.2	24	13
26	FRI																											
27	SAT																											
28	SUN																											
29	MON																											
30	TUE																											
31	WED																											
MONTHLY MEAN		6	6	5	5	5	6	8	8	7	6	6	6	6	6	6	7	7	7	7	8	8	8	8	7	6.6		
NO. OF DAYS		20	20	20	20	20	20	20	20	20	20	20	21	21	20	19	18	20	20	20	20	20	20	20	20		479	
MAX.HRLY MEAN		16	20	17	13	11	13	15	15	18	17	15	14	13	13	16	23	16	14	17	24	23	23	19	20			

TABLE 3-124 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, NOVEMBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	THU																											
2	FRI																											
3	SAT	4	4	3	3	3	3	4	5	6	6	4	4	4	4	4	4	5	5	6	5	5	5	5	5	4.4	24	9
4	SUN	5	4	4	4	4	4	5	5	6	7	7	6	5	6	6	7	6	6	8	8	8	8	7	6	5.9	24	10
5	MON	6	5	5	5	5	5	6	6	6	7	6	7	7	10								10	10	8	6.7	17	19
6	TUE	8	8	6	6	5	5	7	9	9	6	5	4	4	4	4	5	7	7	10	11	14	13	14	17	7.8	24	19
7	WED	17	11	8	7	6	6	8	10	11	8	6	4	4	4	5	5	8	15	14	9	8	9	7	6	8.1	24	20
8	THU	6	4	5	4	3	5	6	9	10	9	8	8	7	6	5	5	6	9	9	8	8	7	6	6	6.5	24	13
9	FRI	6	5	4	4	4	3	4	5	5	4	5	4	5			6	6	6	5	5	4	4	4	4	4.7	22	7
10	SAT	4	4	4	3	3	3	3	4	4	4	4	5	5	6	7	7	8	10	9	6	7	6	4	4	5.2	24	14
11	SUN	4	4	4	3	3	3	3	3	6	3	3	3	3	3	3	3	3	3	4	3	5	4	5	4	3.5	24	12
12	MON	4	3	4	2	2	2	3	3	3	3	3	3	4	5	4	4	5	6	7	6	5	6	7	8	4.2	24	13
13	TUE	11	8	8	8	4	3	4	6	5	4	3	3	3	3	3	4	5	6	4	4	4	4	3	6	4.8	24	14
14	WED	3	2	2	1	1	2	4	7	5	3	2	2	2	2	2	3	4	5	4	4	4	4	4	4	3.2	24	9
15	THU	3	2	2	1	1	2	5	12	13	6	8	4	3	3	3	5	8	12	16	18	17	14	13	16	7.8	24	20
16	FRI	19	15	9	6	4	5	10	15	16			7	6	6	5										9.6	13	27
17	SAT																											
18	SUN	6	6	6	5	5	5	4	4	4	4	5	4	4	4	4	3	3	3	3	3	3	3	3	2	4.0	24	7
19	MON	2	2	2	2	3	3	3	4	3	3	2	2	2	2	3	3	4	4	4	3	3	3	2	2	2.8	24	8
20	TUE	2	2	2	2	1	1	3	4	6	4	4	4	4	4	3	5	5	4	4	3	3	2	3	3	3.2	24	11
21	WED	2	2	1	2	2	2	2	5	5	4	4	3	3	4	4	6	9	10	6	4	3	4	5	4	3.9	24	17
22	THU	9	6	3	2	3	2	2	2	2	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1.6	24	12
23	FRI	0	0	0	0	0	1	1	2	1	1	0	0	1	7	6			12	11	9	8	7	6	6	3.5	22	25
24	SAT	5	5	5	5	5	9	6	7	6	5	5	8	7	4	4	6	7	10	7	6	6	6	6	6	6.0	24	16
25	SUN	6	6	5	5	5	5	4	4	5	4	4	4	4	5	5	9	6	5	5	4	4	4	5	5	4.8	24	21
26	MON	4	4	4	4	3	3	3	5	5	4	4	4	4	4	4		6	7	6	5	5	5	4	4	4.4	23	8
27	TUE	4	3	3	3	3	3	4	4	5	5	5	4	4	5	4	5	6	7	7	6	6	5	5	4	4.6	24	9
28	WED	4	4	3	3	3	3	4	6	7	5	5	4	4	5	5	5	6	7	6	6	6	6	5	5	4.9	24	10
29	THU	5	4	4	4	4	4	5	10	8	5	5	5	5	5		6	7	7	8	9	8	6	6	6	5.9	23	14
30	FRI	5	5	5	5	4	4	6	10	7	6	5	5	5				11	16	14	14	13	17	15	25	9.4	21	29
MONTHLY MEAN		6	5	4	4	3	4	4	6	6	5	4	4	4	4	4	5	6	7	7	6	6	6	6	6	5.1		
NO. OF DAYS		27	27	27	27	27	27	27	27	27	26	26	27	27	25	23	22	24	25	25	25	25	26	26	26		621	
MAX.HRLY MEAN		19	15	9	8	6	9	10	15	18	9	8	8	7	10	7	9	11	16	16	18	17	17	15	25			

TABLE 3.125 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, DECEMBER 1962

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SAT	24	25	25	22	23	15	20	22	12	11	7	7	7	7	6	10	11	20	21	13	9	10	12	19	14.9	24	30
2	SUN	20	19	21	18	17	11	6	5	6	6	6	6	5	5	6	5	6	8	8	8	7	6	6	6	8.7	24	24
3	MON	5	5	4	4	4	4	4	8	7	6	6	5	4	4	4	4	6	8	8	8	6	6	6	6	5.6	24	11
4	TUE	4	4	5	5	5	4	5	10	8	6	5	5	4	4	4	5									5.3	16	13
5	WED																											
6	THU																											
7	FRI																											
8	SAT																											
9	SUN																											
10	MON																											
11	TUE																											
12	WED																											
13	THU																											
14	FRI																											
15	SAT																											
16	SUN																											
17	MON																											
18	TUE																											
19	WED																											
20	THU																											
21	FRI																											
22	SAT																											
23	SUN																											
24	MON																											
25	TUE																											
26	WED																											
27	THU																											
28	FRI																											
29	SAT																											
30	SUN																											
31	MON																											
MONTHLY MEAN																												
NO. OF DAYS		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	88		
MAX HRLY MEAN		24	25	25	22	23	15	20	22	12	11	7	7	7	7	6	10	11	20	21	13	9	10	12	19			

TABLE 3.126 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, JANUARY 1963

DAY OF		A M												P M														
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO. OF HR	5-MIN MAX
1	TUE																											
2	WED																											
3	THU																											
4	FRI																											
5	SAT																											
6	SUN																											
7	MON																											
8	TUE																											
9	WED																											
10	THU																											
11	FRI																											
12	SAT																											
13	SUN																											
14	MON																											
15	TUE																											
16	WED																											
17	THU																											
18	FRI																											
19	SAT																											
20	SUN																											
21	MON																											
22	TUE																											
23	WED																											
24	THU																											
25	FRI	7	6	5	5	5	5	6	7	7	7	7	7	6	7	7	7	10	10	10	9	9	8	7	7	7.0	24	13
26	SAT	7	7	7	7	7	7	7	7	8	9	9	9	8	9	8	8	10	10	9	9	9	9	8	8	8.1	24	16
27	SUN	9	8	8	8	8	8	8	8	8	9	9	8	7	7	7	7	7	7	8	8	7	7	7	7	7.7	24	10
28	MON	7	6	6	6	6	6	7	9	10	9	8	8	8	9	8	10	10	11	10	10	9	9	9	9	8.3	24	12
29	TUE	8	8	8	8	9	14	12	15	15	13	12	11	10		10	11	12	12	11	10	10	10	10	10	10.9	23	21
30	WED	11	10	9	9	10	10	11	14	14	13	12	15	16	15	14	15	16	16	16	13	12	12	12	11	12.7	24	22
31	THU	10	10	10	10	9	10	11	12	12	11	11	11	12	11	11	11	13	13	14	14	14	14	14	14	11.6	24	16
MONTHLY MEAN																												
NO. OF DAYS		7	7	7	7	7	7	7	7	7	7	7	7	7	6	7	7	7	7	7	7	7	7	7	7	167		
MAX HRLY MEAN		11	10	10	10	10	14	12	15	15	13	12	15	16	15	14	15	16	16	16	14	14	14	14	14			

TABLE 3-127 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, FEBRUARY 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI	13	12	12	11	11	11	12	13	14	15			7	7	8	8	9	9	8	7	7	7	6	6	9.7	22	17
2	SAT	6	6	6	11	10	8	7	7	9	10	11	10	9	15	10	9	10	11	9	9	9	8	8	7	9.0	24	21
3	SUN	6	5	5	4	4	4	4	3	4	6	4	4	3	4	4	4	4	4	4	4	4	5	8	4	4.3	24	13
4	MON	3	3	3	3	3	3	4	5	5	4	4	4	7	8	5	5	6	7	6	5	5	5	5	4	4.7	24	16
5	TUE	4	4	3	3	4	4	6	12	12	14	15	12	8	8	9	10	11	15	22	19	16	13	10	10	10.1	24	27
6	WED	9	8	12	16	10	13	16	22	21	23	23	10	10	11	12	11	14	17	25	18	15	19	27	30	16.4	24	32
7	THU	29	28	20	16	17	11	16	23	28	24	24	22	12	18	14	13	15	16	12	11	8	7	6	6	16.4	24	32
8	FRI	5	5	5	4	4	4	4	6	5	6	8	8	6	6	4	4	5	6	6	5	5	4	16	8	5.7	24	30
9	SAT	9	6	15	10	5	3	3	4	7	6	5	6	4	4	4	4	6			4	7	7	7	8	6.0	22	26
10	SUN	4	4	4	4	4	6	5	4	6	8	5	5	5	5	5	6	6	6	7	6	8	6	6	6	5.4	24	13
11	MON	5	5	4	4	4	4	6	8	9	9			10	11	12	12	14	14	13	11	9	8	8	8	8.5	22	18
12	TUE	6	7	6	6	6	7	9	10	12	11	9		8	9	8	9	9	9	9	8	10	17	14	7	8.9	23	24
13	WED																											
14	THU																											
15	FRI																											
16	SAT																											
17	SUN																											
18	MON																											
19	TUE																											
20	WED																											
21	THU																											
22	FRI																											
23	SAT																											
24	SUN																											
25	MON																											
26	TUE																											
27	WED																											
28	THU																											
MONTHLY MEAN																												
NO. OF DAYS		12	12	12	12	12	12	12	12	12	12	10	9	12	12	12	12	12	11	11	12	12	12	12	12		281	
MAX. HRLY MEAN		29	28	20	16	17	13	16	23	28	24	24	22	12	18	14	13	15	17	25	19	16	19	27	30			

TABLE 3-128 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, APRIL 1963

DAY	OF	A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON																											
2	TUE																											
3	WED																											
4	THU																											
5	FRI																											
6	SAT																											
7	SUN																											
8	MON																											
9	TUE																											
10	WED																											
11	THU																											
12	FRI																											
13	SAT																											
14	SUN																											
15	MON																											
16	TUE																											
17	WED																											
18	THU																											
19	FRI																											
20	SAT																											
21	SUN																											
22	MON																											
23	TUE																											
24	WED																											
25	THU																											
26	FRI																											
27	SAT	3	1	1	3	3	3	4	2	0	0	0	0	1	0	1	1	1	2	2	2	3	3	2	3	1.7	24	6
28	SUN	3	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0.7	24	7
29	MON	1	0	0	0	1	3	4	4	2	2	2	2	2	3	2	3	3	2	2	2	2	2	2	1	2.0	24	11
30	TUE	1	1	1	1	2	2	4	5	4	5	4	3	3			4	5	4	4	4	3	3	2	2	3.2	22	7
MONTHLY MEAN																												
NO. OF DAYS		4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	4	4	4	4	4	4	4	4	4		94	
MAX.HRLY MEAN		3	4	1	3	3	3	4	5	4	5	4	3	3	3	2	4	5	4	4	4	3	3	2	3			

TABLE 3-129 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, MAY 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	WED	2	2	1	1	1	2	3	4	3	3	3	3	3	3	3	4	4	4	4	4	3	3	3	3	2.9	24	6
2	THU	2	1	1	1	2	3	4	4	3	2	3	3	3	4	4	4	4	4	5	10	15	17	17	11	5.3	24	24
3	FRI	9	8	6	7	10	14	13	17	21	13	6	4	3	3	3	2	3	2	3	4	4	4	4	6	6.9	24	26
4	SAT	4	4	5	4	4	6	7	9	10	8	6	4	3	2	2	1	1	1	3	4	2	3	3	2	4.1	24	11
5	SUN	2	2	1	1	1	1	1	1	2	2	3	3	2	2	2	1	1			5	5	5	6	5	2.4	22	8
6	MON	5	4	4	4	4	6	7	6	6	5	5	4	4	5	5	5	6	5	5	6	6	6	6	6	5.1	24	9
7	TUE	5	5	5	5	5	6	9	7	6	5	6	5	6	5	6	6	6	6	6	7	6	6	5	5	5.8	24	11
8	WED	5	5	5	5	5	7	9	9	7	6	6	5	5	5	5	6	7	6	7	7	7	9	10	11	6.6	24	16
9	THU	6	5	4	4	5	8	13	15	10	8	7	6	6	6	6	7	7	6	7	9	11	13	22	11	8.3	24	27
10	FRI	4	4	4	4	4	7	15	13	9	6	5	4					6	6	5	6	6	8	6	4	6.2	20	21
11	SAT	4	4	4	5	4	4	5	5	5	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3.8	24	6
12	SUN	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	5	5	3	3.2	24	6
13	MON	3	3	2	2	2	5	7	7	4	3	4	4		3	4	5	4	3	3	3	3	3	2	2	3.5	23	9
14	TUE	2	2	2	2	2	3	5	6	5	5	6	7	6	5	4	5	6	5	7	8	6	4	3	3	4.5	24	12
15	WED	3	2	2	2	2	4	5	5	4	3	5	4	3	3	3	3	3	4	4	4	5	6	6	5	3.6	24	10
16	THU	5	4	3	2	3	4	8	9	5	4	4	3	4	4	4	4	4	4	4	4	4	4	3	3	4.1	24	12
17	FRI	3	2	2	2	2	3	5	5	4	4	4	4	4	4			5	4	4	4	3	3	3	3	3.5	22	7
18	SAT	3	2	2	2	2	3	5	6	5	4	3	3	3	3		3	4	4	6	8	11	9	11	9	4.8	23	13
19	SUN	6	5	4	4	3	4	3	4	4	4	4	3	3	2	3	3	3	3	5	6	6	9	10	5	4.4	24	14
20	MON	3	3	3	3	3	5	7	7	6	4	3	3	4	4	4	4	4	4	4	6	6	5	5	5	4.3	24	10
21	TUE	4	5	5	5	5	6	8	6	5							4	5	4	4	4	4	4	4	3	4.7	18	10
22	WED	2	2	2	2	3	5	9	11	7	4	3	3	3	3	4	4	4	4	5	4	3	2	2	1	3.8	24	16
23	THU	1	1	1	1	1	3	4	3	2	2	2	2	3	3	2	3	3	2	2	4	4	7	2	2	2.4	24	10
24	FRI	1	1	1	1	1	3	3	3	2	2	1	1	2	3	3	3	3	3	3	3	3	3	4	4	2.4	24	5
25	SAT	3	2	4	3	4	5	4	2	2	2	2	2	3	2	2	2	2	2	3	2	2	1	1	1	2.5	24	7
26	SUN	1	0	0	0	0	1	1	1	1	1	2	1	1	1	1	1	2	2	2	2	1	1	1	1	1.1	24	3
27	MON	1	1	1	0	1	1	2	2	2			4	5	5	5	3	3	3	3	3	2	3	2	3	2.4	22	7
28	TUE	4	2	2	2	2	4	4	5	4	4	4	4	4	4	4	5	6	4	2	3	3	4	3	4	3.7	24	9
29	WED	3	2	2	3	3	5	8	9	7	6	5	5	5	9	8	9	8	6	6	8	7	7	5	4	5.8	24	14
30	THU	4	4	3	3	4	4	5	5	5	5	5	4	3	4	4	4	4	4	5	7	13	19	11	8	5.8	24	22
31	FRI	7	5	4	4	4	7	9	6	4	4	4	5	5	4	5	4	5	5	4	6	8	9	15	14	6.1	24	18
MONTHLY MEAN		3	3	3	3	3	5	6	6	5	4	4	4	4	4	4	4	4	4	4	5	5	6	6	5	4.3		
NO. OF DAYS		31	31	31	31	31	31	31	31	31	29	29	30	28	29	27	29	31	30	30	31	31	31	31	31		726	
MAX HRLY MEAN		9	8	6	7	10	14	15	17	21	13	7	7	6	9	8	9	8	6	7	10	15	19	22	14			

TABLE 3-130 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, JUNE 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SAT	14	10	9	7	6	6	6	5	5	4	4	4	4	4	5	5	5	5	4	5	4	4	4	4	5.5	24	15
2	SUN	4	4	4	4	4	4	5	5	6	6	6	6	7	6	6	6	6	6	6	6	4	4	4	4	5.2	24	8
3	MON	4	4	4	4	4	5	6	7	6	6	6	6	6	6	6	7	7	7	8	9	9	7	6	5	6.1	24	11
4	TUE	5	4	4	4	5	6	7	7	6	6	5	4	4	4	5	5	6	5	5	6	7	6	6	6	5.4	24	9
5	WED	5	4	4	4	5	7	9	9	8		6	6	6	6	6	7	7	6	7	8	9	11	13	13	7.2	23	15
6	THU	11	11	10	7	7	10	13	14	12	5	5	4	5	5	5	6	6	7	8	11	9	10	9	8	8.2	24	19
7	FRI	6	7	7	4	5	6	11	9	6	5	5	4	4	4	5	8	8	14	11	9	4	4	3	3	6.3	24	18
8	SAT	3	3	3	2	2	3	4	4	4	4	5	4	5	4	4	4	4	4	4	4	4	4	4	5	3.7	24	7
9	SUN	4	3	3	3	3	3	3	3	4	4	4	3	2	3	3	3	3	4	5	6	7	8	8	9	4.3	24	12
10	MON	8	4	3	3	4	8	12	11	7	4				7	8	9	9	8	9	10	8	7	7	7	7.2	21	16
11	TUE	6	6	6	6	7	10	14	13	11	10	11	10	9	8	9	9	9	6	8	9	10	11	7	6	8.8	24	16
12	WED	5	5	5	5	5	6	7	7	6	6	5	5	6	6	6	6	8	6	6	6	6	7	6	6	5.9	24	10
13	THU	5	5	5	5	5	7	9	7	6	6	6	6	6	6	6	7	7	7	7	9	13	15	11	10	7.3	24	19
14	FRI	9	7	7	8	8	10	13	11	8	8	7	7	7	7	8	9	9	8	8	10	10	12	14	11	9.0	24	16
15	SAT	8	7	7	7	6	7	7	7	7	7	6	7	7	7	7	7	7	6	8	9	9	8	7	6	7.0	24	10
16	SUN	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	8	8	11	14	14	20	7.9	24	22
17	MON	17	14	11	8	8	12	15	14	8	7	6	6	6	6	7	8	7								9.5	17	19
18	TUE												5	5	5	5	5	6	6	6	7	6	6	6	6	5.7	13	10
19	WED	5	4	5	5	5	8	10	12	10	7	5	5	5	5	5	5	5	3	3	4	4	4	4	4	5.4	24	14
20	THU	4	4	4	4	4	5	7	8	6	5	5	5	4	4	4	7	8	12	11	8	7	6	6	5	5.8	24	14
21	FRI	5	4	4	4	4	4	5	6	5	5	4	4	4	3	4	4	5	4	4	6	7	7	8	8	4.9	24	11
22	SAT	7	6	5	4	5	5	6	5	4	3	3	3	3	4	4	4	4	4	5	6	7	8	7	6	4.8	24	10
23	SUN	5	5	6	4	6	5	4	4	4	4	4	4	4	4	4	4	4	4	5	7	9	12	13	14	5.8	24	19
24	MON	9	10	7	8	7	8	13	9			4	3	4	4	4	4	3	4	4	5	6	9	7	7	6.3	22	18
25	TUE	9	9	8	9	7	11	11	8	6	5	4	4	4	5	5	5	5	4	5	6	8	11	10	9	7.0	24	17
26	WED	9	8	5	5	7	10	13	13	7	5	5	5	5	4	5	5	5	5	5	6	7	7	7	6	6.6	24	16
27	THU	5	5	4	4	4	7	10	13	13	8	6	4	4	3	4	5	5	4	5	6	6	6	6	4	5.8	24	17
28	FRI	4	4	3	3	4	6	7	7	5	4	4	3	3	4	4	5	5	4	4	4	5	4	4	4	4.3	24	10
29	SAT	4	3	3	3	3	4	4	4	4	4	4	3	3	4	3	3	4	4	4	4	5	5	4	5	3.8	24	6
30	SUN	4	5	5	4	4	4	4	3	3	4	4	4	4	3	3	4	2	3	4	5	8	8	8	9	4.5	24	10
MONTHLY MEAN		6	6	5	5	5	7	8	8	6	5	5	5	5	5	5	6	6	6	6	7	7	8	7	7	6.1		
NO. OF DAYS		29	29	29	29	29	29	29	29	28	27	28	29	29	30	30	30	30	29	29	29	29	29	29	29		696	
MAX.HRLY MEAN		17	14	11	9	8	12	15	14	13	10	11	10	9	8	9	9	9	14	11	11	13	15	14	20			

TABLE 3-131 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, JULY 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	MON	8	4	3	3	3	6	9	8	4	4	5	5	5	3	4	3	3	3	3	4	5	6	5	4	4.6	24	12
2	TUE	3	3	3	4	4	8	10	9	7	7	4	4	4	4	7	9	6	4	4	4	2	4	3	3	4.9	24	15
3	WED	2	2	2	2	2	6	6	5	3	3	3	2	2	2	2	2	2	2	2	3	3	3	2	2	2.7	24	9
4	THU	2	1	1	1	1	2	2	1	1	1	3	1	3	1	0	1	1	1	1	3	5	9	7	5	2.2	24	11
5	FRI	3	2	2	2	2	4	5	4	2	2	1	2	2		4	5	5	4	5	6	7	8	7	7	3.9	23	10
6	SAT	5	4	4	4	4	5	6	5	5	4	4	4	4	3	4	4	4	5	5	6	7	7	6	6	4.7	24	8
7	SUN	5	5	5	5	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4.4	24	6
8	MON	4	4	3	3	4	5	8	9	6	5	4	4	4	4	5	5	5	4	4	5	6	5	4	3	4.7	24	12
9	TUE	3	3	3	3	3	4	5	5	4	4	3	2	3	3	4	4	4	4	4	4	5	6	5	5	3.9	24	8
10	WED	5	6	5	4	4	7	8	5	4	4	4	4	4	4	5	5	5	5	6	7	8	8	8	8	5.4	24	11
11	THU	7	8	5	8	8	12	11	9	7	6	4	4	4	4	5	4	6	5	7	10	12	14	7	6	7.2	24	16
12	FRI	6	5	7	11	12	21	27	20	9	7	6	5	5	5	5	8	9	12	14	9	11	17	13	17	10.7	24	33
13	SAT	19	17	14	11	8	6	7	6	5	4	5	6	6	7	6	4	5	6	5	6	6	6	6	6	7.4	24	20
14	SUN	5	5	5	4	5	5	5	5	5	5	6	5	5	5	5	5	5	6	6	6	7	6	6	5	5.3	24	8
15	MON	4	6	5	5	6	10	13	11	8	6	6	5	6	6		4	5	4	5	8	9	12	15	15	7.5	23	22
16	TUE	9	8	8	8	9	10	14	13	10	5	6	6	4	4	4	4	3	3	4	7	11	9	9	8	7.2	24	17
17	WED	6	6	7	5	8	10	9	9	7	5	5	5	5	5	5	5	5	4	5	6	5	6	6	4	5.9	24	12
18	THU	4	4	4	4	5	6	7	7	5	4	3	4	4	4	4	4	5	5	5	7	7	8	9	7	5.3	24	10
19	FRI	5	4	4	4	4	7	9	9	7	7	5	4	4	4	4	5	5	5	7	8	7	7	8	7	5.8	24	12
20	SAT	6	6	4	4	5	7	9	6	6	5	4	4	3	3	3	3	5	4	5	6	7	8	8	7	5.3	24	13
21	SUN	4	2	4	3	4	4	4	4	4	4	4	3	4	5	3	4	3	5	5						3.8	19	14
22	MON																											
23	TUE	6	6	6	9	7	7	9	8	7	6	7	7	6	7	7	7	7	5	8	6	6	13	11	7	7.3	24	18
24	WED	6	7	6	6	9	9	14	10		6	8	5	5	8	4	9	9	9	8	8	13	7	7	8	7.8	23	24
25	THU	5	9	10	9	12	9	15	12	9	6	6	8	5	7	4	8	3	7	7	8	8	6	6	9	7.7	24	27
26	FRI	10	9	3	2	3	5	7	11	10	4	2	4	5	10	9	8	8	9	6	5	9	9	8	8	6.9	24	16
27	SAT	6	6	6	6	5	4	6	5	5	5	4	2	5	4	3	5	3	4	7	5	9	6	7	7	5.3	24	15
28	SUN	4	3	4	2	1	1	1	3	3	3	3	1	3	1	3	4	1	5	4	3	2	2	2	4	2.4	24	12
29	MON	4	5	4	3	4	6	9	5	4	3	2	2	3	2	3	3	6	9	4	4	3	1	2	2	3.9	24	14
30	TUE	2	0	0	0	3	11	11	7	4	2	4	1	0	1	2	3	4	4	4	5	6	7	5	6	3.7	24	23
31	WED	6	3	3			5	6	4	6	4	7	3	4	3	5	5	6	5	5	7	6	4	4	3	4.7	22	16
MONTHLY MEAN		5	5	5	5	5	7	9	7	6	4	4	4	4	4	4	5	5	5	5	6	7	7	7	6	5.4		
NO. OF DAYS		30	30	30	29	29	30	30	30	29	30	30	30	30	29	29	30	30	30	30	29	29	29	29	29		710	
MAX.HRLY MEAN		19	17	14	11	12	21	27	20	10	7	8	8	6	10	9	9	9	12	14	10	13	17	15	17			

TABLE 3-132 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, AUGUST 1963

DAY OF		A M												P M												DAILY	NO.	5-MIN
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	MEAN	OF HR	MAX
1	THU		5	5	8	8	8	12	12	12	7	6	7	7	9	8	10	10	10	9	9	8	6	9	11	8.6	23	20
2	FRI	10	6	8	6	3	6	10	10	8	5	4	5	5	3	6	7	6	8	8	10	11	13	10	10	7.4	24	16
3	SAT	9	6	6	6	4	8	7	8			13	10	10	10	9	13	10	14	13	12	12	16	15	19	10.3	22	25
4	SUN	18	12	9	10	12	11	9	8	11	13	10	12	14	13	11	12	13	8	15	13	17	21	22	21	13.1	24	24
5	MON	9	11	11	10	11	14	12	10	12	9	11	10	10	9	11	9	10	8	10	11	12	14	12	19	11.0	24	25
6	TUE	19	18	13	14	17	20	19	18	15	12	11	10	13	17	20	17	18	14	13	17	16	20	19	18	16.1	24	24
7	WED																											
8	THU																											
9	FRI																											
10	SAT																											
11	SUN																											
12	MON																											
13	TUE																											
14	WED																											
15	THU	2	2	1	1	2	4	6	4	2	2	2	2	2	1	2	3	3	3	4	5	5	6	5	5	3.1	24	10
16	FRI	4	4	3	4	6	8	13	12	7	7	6	6	4	4	4	5	5	4	4	5	5	5	5	4	5.6	24	15
17	SAT	4	[illegible]	4	4	5	5	6	5	5	5	5	5		5	5	4	4	4	5	5	6	5	6	6	4.8	23	8
18	SUN	5	5	5	5	5	5	5	5	6	5	4					3	3	3	4	5	5	5	5	5	4.5	20	7
19	MON	4	4	4	4	4	5	7	6	4	3	3	4	5	5	4	5	5	4	5	5	5	5	4	6	4.6	24	8
20	TUE	6	5	4	5	5	9	11	9	8	8	6	5	7	6	6	7	6	5	4	4	5	6	8	6	6.3	24	16
21	WED	6	5	5	5	6	7	9	8	6	5	5	5	5	5	5	6	6	5	5	6	6	6	7	6	5.7	24	11
22	THU	6	5	5	5	5	8	13	13	10	8	6	6	7	7	7	6	6	7	9	16	17	11	11	11	8.5	24	20
23	FRI	8	7	6	7	7	9	12	10	8	7	5	4	4	5	5	5	6	6	8	10	12	16	13	7	7.7	24	19
24	SAT	6	6	5	5	5	7	9	9	7	5	5	3	4	4	5	6	8	6	6	7	7	6	5	5	5.8	24	11
25	SUN	4	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	7	7	7	9	15	5.3	24	16
26	MON	14	10	7	7	7	10	9				6	7	7	7	6	6	6	5	6	8	8	9	9	9	7.7	21	16
27	TUE	10	10	9	8	8	11	13	13	12	11	9	7	8	7	7	8	7	7	8	9	10	10	9	9	9.1	24	20
28	WED	8	7	7	7	7	10	10	9	8	7	6	6	7	6	7	6	7	7	7	7	7	7	6	7	7.2	24	12
29	THU	6	6	6	6	7	8	9	9	8	8	11	11	11	9	9	10	9	9	9	9	9	10	10	10	8.7	24	15
30	FRI	9	7	7	7	6	10	12	11	9	7	6	5	6	6	7	8	7			13	15	13	11	9	8.7	22	18
31	SAT	7	7	9	10	9	10	11	8	6	6	6	5	4	4	4	5	5	6	8	9	8	8	7	8	7.1	24	12
MONTHLY MEAN		8	7	6	6	7	9	10	9	8	7	7	6	7	7	7	7	7	7	7	9	9	10	9	10	7.7		
NO. OF DAYS		22	23	23	23	23	23	23	22	21	21	23	22	21	22	22	23	23	22	22	23	23	23	23	23		539	
MAX.HRLY MEAN		19	18	13	14	17	20	19	18	15	13	13	12	14	17	20	17	18	14	15	17	17	21	22	21			

TABLE 3-133 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, SEPTEMBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	SUN	7	7	6	6	5	6	6	6	5	5	6	5	6	5	6	6	5	6	7	9	13	17	15	12	7.4	24	19
2	MON	12	14	12	14	13	13	14	8	7	7	5	5	5	5	5	5	5	6	7	7	7	6	6	6	8.1	24	16
3	TUE	6	6	6	6	6	8	9	9	8	8	8	7	6	7			1	0	2	1	0	1	0	0	4.8	22	10
4	WED	0	0	0	0	1	3	5	5	3	2	3	1	2	2	2	2	0	1	2	2	1	1	0	1	1.6	24	9
5	THU	1	0	0	0	1	2	3	3	3	3	3	3	3	4	3	2	1	1	1	1	1	1	0	1	1.6	24	4
6	FRI	1	0	0	0	0	2	4	4	3	2	2	2	2	1	2	2	2	3	3	3	3	2	2	2	1.9	24	6
7	SAT	1	1	1	1	1	2	3	3	3	3	2	1	1	1	1	1	1	1	2	3	2	2	2	2	1.6	24	5
8	SUN	1	1	1	1	2	2	5	5	2	1	1	1	1	1	1	1	0	1	3	5	3	2	1	2	1.9	24	6
9	MON	2	1	1	2	2	5	9	14	9	9	6	3	2	2	3	3	3	3	6	7	7	6	6	5	4.7	24	17
10	TUE	4	2	2	2	3	5	7	7	5	2	2	2	2	2	3	2	2	3	4	3	3	4	3	4	3.1	24	13
11	WED	3	2	1	2	2	4	5	5	5	5		4	4	4	5	5	5	3	5	4	3	3	3	3	3.7	23	9
12	THU	2	2	2	2	3	4	6	6	4	4	2	2	4	5	5	5	4	4	5	5	5	5	4	4	3.9	24	8
13	FRI	4	2	2	3	3	4	6	6	4	5	4	5	6	6	6	5	5	5	5	5	5	5	5	5	4.5	24	8
14	SAT	4	4	4	4	4	4	5	5	5	5	5	4	4	4	4	4	5	5	5	6	5	4	4	5	4.5	24	6
15	SUN	5	4	4	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	6	6	6	6	5.6	24	8
16	MON	6	5	5	5	6	4			2	2	2	2	2	2	2	3	3	3	2	3	2	2	2	2	3.2	22	11
17	TUE	2	2	2	2	2	2	4	4	2	2	2		2	2	2	2	2	2	2	2	2	2	2	2	2.2	23	6
18	WED	2	2	2	2	2	3	5	4	3	2	2	2	3	2	2	2	2	2	4	4	2	4	5	4	2.8	24	8
19	THU	3	2	2	2	2	3	8	12	7	3	2	2	2	2	2	2	2	3	6	11	8	7	6	3	4.1	24	15
20	FRI	3	2	2	1	1	4	12	12	10	6	3	2	1	1	3	2	2	4	6	4	5	6	9	5	4.4	24	19
21	SAT	4	3	2	1	1	2	2	2	2	3	3	2	3	2	3	4	4	4	4	4	3	3	3	3	2.8	24	7
22	SUN	2	2	2	1	2	2	2	2	2	3	2	3	3	3	3	3	3	4	5	5	4	4	4	4	2.8	24	5
23	MON	4	4	4	4	4	7	11	9	6	6	5	5		5	6	5	4	3	5	5	6	5	4	5	5.3	23	14
24	TUE	5	4	4	4	5	6	8	6	7	4	5	5	5	5	5	5	4	5	6	8	8	10	10	9	6.0	24	12
25	WED	10	9	10	10	11	12	18	21	17	7	6	5	5	5	5	5	5	5	6	6	6	6	6	6	8.5	24	24
26	THU	6	5	9	9	9	12	15	16	11	7	6	5	7	9	8	8	7	7	10	8	7	8	7	6	8.3	24	18
27	FRI	6	6	5	6	7	11	17	18	15	8	6	6	7	7	6	5	7	8	9	8	9	11	11	12	8.7	24	22
28	SAT	10	11	6	5	6	7	10	9	9	10	8	7	6	6	5	6	6	6	7	7	7	6	7	6	7.2	24	14
29	SUN	6	5	6	5	5	5	5	5	7	6	6	5	6	5	5	4	5	7	10	9	10	8	5	4	6.1	24	15
30	MON	3	3	3	3	4	6	9	8	7	6	6	5	6	6		6	7	8	11	10	10	10	9	7	6.6	23	14
MONTHLY MEAN		4	4	4	4	4	5	7	7	6	5	4	4	4	4	4	4	4	4	5	5	5	5	5	5	4.6		
NO. OF DAYS		30	30	30	30	30	30	29	29	30	30	29	29	29	30	28	29	30	30	30	30	30	30	30	30	712		
MAX.HRLY MEAN		12	14	12	14	13	13	18	21	17	10	8	7	7	9	8	8	7	8	11	11	13	17	15	12			

TABLE 3.134 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, OCTOBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	TUE	6	5	5	5	6	9	14	14	11	8	8	5	5	7	3	7	7	7	10	8	8	8	7	8	7.8	24	17
2	WED	7	6	5	5	6	9	11	12	11	9	9	8	8	7	5	7	8	7	8	8	7	7	6	6	7.5	24	14
3	THU	5	5	5	6	6	8	11	11	10	9	7	7	7	7	7	5	5	6	6	5	5	6	5	5	6.5	24	14
4	FRI	4	1	0	0	1	3	8	8	7	6	5	5	6	6	5	6	6	9	10	13	14	19	20	18	7.5	24	24
5	SAT	12	15	11	17	15	15	15	8	6	5	5	6	6	7	6	6	6	7	11	10	9	9	13	13	9.8	24	19
6	SUN	11	9	8	7	6	6	7	7	7	7	7	7	7	6	6	6	7	8	9	8	8	9	7	6	7.3	24	13
7	MON	6	6	5	5	6	8	10	11	10	8		9	11	11	11	10	11	10	10	11	10	9	8	7	8.7	23	13
8	TUE	7	6	6	7	7	9	14	13	14	13	7	5	7	7	6	6	7	7	8	8	7	8	9	7	8.2	24	17
9	WED	6	5	4	5	6	8	10	9	7	7	8	6	7	8	6	6	6	6	8	9	11	15	13	15	8.0	24	18
10	THU	16	16	9	10	11	11	18	20	20	10	9	7	8	7	6	6	7	8	8	9	9	10	10	10	10.6	24	24
11	FRI	8	7	6	6	6	9	11	11	9	8	7	8	8	7	7	8	8	8	11	9	8	10	8	7	9.1	24	16
12	SAT	7	7	8	5	5	5	7	6	5	5	5	4	5	4	4	4	5	6	9	8	9	14	15	13	6.8	24	17
13	SUN	10	8	7	6	4	5	5	4	4	4	5	4	5	4	4	4	4	6	7	7	6	7	7	7	5.6	24	12
14	MON	7	7	7	6	6	8	13	15	16	13	9	7	7		3	5	6	7	9	14	13	14	11	12	9.3	23	18
15	TUE	10	7	6	5	7	10	14	16	16	12	10	9	7	6	6	6	8	10	17	12	11	12	13	11	10.1	24	23
16	WED	12	14	13	13	14	16	19	17	18	14	9	6	5	3	2	3	6	15	26	33	24	26	21	16	14.4	24	37
17	THU	9	6	6	6	8	14	23	26	12	9	8	6	9	7	6	6	9	14	12	17	23	29	27	28	13.3	24	32
18	FRI	25	23	17	18	20	19	22	22	14	10	9	9	8	8	8	8	8	12	13	16	29	25	25	30	16.6	24	35
19	SAT	27	17	18	20	16	15	22	22	21	15	9	6	5	5	5	5	6	8	10	17	23	25	28	28	15.6	24	33
20	SUN	25	21	19	11	9	10	8	8	7	8	8	7	7	6	5	5	6	7	9	9	9	9	8	8	9.5	24	26
21	MON	7	6	5	6	7	12	16	11	9	8	7	7		7	6	7	7	9	14	10	11	10	8	6	8.5	23	20
22	TUE	5	4	4	4	5	6	7	7	7	7	6	6	7	7	6	7	7	7	7	6	6	6	5	5	6.0	24	10
23	WED	5	5	5	5	5	7	8	9	8	8	8	8	8	9	7	6	7	8	8	8	8	9	10	9	7.4	24	14
24	THU	9	12	14	13	12	12	17	21	17	10	10	9	8	8	7	7	7	8	9	11	13	16	16	15	11.7	24	23
25	FRI	19	17	13	12	11	14	19	21	16	11	7	6	7	8	7	8	8	8	9	9	7	7	6	6	10.6	24	23
26	SAT	6	7	7	6	7	7	8	8	9	12	12	11	11	9	9	8	10	13	16	12	12	11	10	11	9.6	24	19
27	SUN																											
28	MON																											
29	TUE																											
30	WED	5	4	4	4	4	5	6	6	7	7	7	7	6	6	4	5	5	7	6	6	6	6	5	5	5.6	24	8
31	THU	4	4	3	3	4	5	7	10	11	6			7	7	8	9	10	10	8	8	8	7	7	7	7.1	22	14
MONTHLY MEAN		10	9	8	8	8	9	12	13	11	9	8	7	7	7	6	6	7	8	10	11	11	12	12	11	9.2		
NO. OF DAYS		28	28	28	28	28	28	28	28	28	28	26	27	27	27	28	28	29	28	28	28	28	28	28	28		667	
MAX HRLY MEAN		27	23	19	20	20	19	23	26	21	15	12	11	11	11	11	10	11	15	26	33	29	29	28	30			

TABLE 3-135 HOURLY AVERAGES OF CARBON MONOXIDE, ppm (infrared analysis) WASHINGTON, NOVEMBER 1963

DAY OF		A M												P M												DAILY MEAN	NO. OF HR	5-MIN MAX
MONTH	WEEK	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			
1	FRI	6	6	5	5	6	7	9	11	10	10	10	10	11	13	15	16	13	12	11	10	9	8	8	7	9.4	24	18
2	SAT	6	6	5	5	4	5	5	6	6	6	6	6	6	5	5	5	6	6	7	7	6	6	6	6	5.7	24	7
3	SUN	6	6	5	4	4	5	6	5	6	7	7	7	6	7	7	7	7	8	9	11	10	10	8	10	7.0	24	13
4	MON	10	10	9	8	8	9	11	14	14	12	10	9	9	9	10	11	12	12	11	11	10	10	9	9	10.2	24	17
5	TUE	8	8	7	8	8	8	9	11	12	12	12	11	10	12	12	11	13	14	12	12	13	13	12	12	10.9	24	16
6	WED	10	10	10		9	10	12	12	13	12	10	16	19	20	20	18	13	11	9	7	8	7	6	5	11.6	23	21
7	THU	5	5	4	4	4	4	4	6	8	8	7	5	5			9	10	11	10	9	9	9	8	8	6.9	22	12
8	FRI	7	6	6	6	7	6	8	9	10	10	8	8	7	7	8	6	6	8	7	6	6	7	7	6	7.2	24	11
9	SAT	5	4	4	3	3	4	5	5	5	5	5	5	5	5	6	6	6	6	8	7	8	9	11	11	5.8	24	17
10	SUN	13	13	13	10	11	10	9	11	6	5	6	7	7	6	6	5	6	8	7	8	8	6	5	4	7.8	24	17
11	MON	5	4	3	4	5	6	7	7	6	5	4	2	3	4	4	4	4	9	16	17	13	5	5	3	6.0	24	22
12	TUE	3	3	4	3	3	3	4	7	7	6	5	5	4	6	6	6	6	8	7	7	9	10	11	10	5.9	24	13
13	WED	8	6	7	10	5	5	10	17	18	10	4	5	5	6	7	7	6	7	7	6	5	4	3	3	7.1	24	22
14	THU	2	2	3	3	3	3	5	6	6	5	5	4	4	6	6	5	6	7	4	4	5	4	4	4	4.4	24	9
15	FRI	4	3	3	4	4	4	4	5	6	6	6	7	6	6	7	7	7	8	8	8	8	10	12	11	6.2	24	15
16	SAT	11	8	6	6	5	5	5	6	6	7	6	5	5	5	6	6	7	6	7	7	7	6	6	7	6.1	24	12
17	SUN	7	5	6	7	5	5	5	6	6	6	5	7	7	7	7	8	8	8	8	8	8	6	6	6	6.5	24	12
18	MON	5	4	4	4	5	5	6	8	9	9	9		6	8	9	5	7	6	5	4	4	6	3	2	5.8	23	13
19	TUE	1	0	0	1	1	2	3	6	5	9	14	15	15	17	18	18	19	20	20	19	17	17	18	19	11.4	24	23
20	WED	17	12	12	12	12	12	17	20	16	16	15	17	17	18	19	20	20	19	18	17	16	15	15	15	16.1	24	23
21	THU	14	14	14	14	15	15	16	18	19	20	20	19	18	19	20	22	25	27	26	21	19	20	20	20	18.9	24	30
22	FRI	33	30	25	21	18	20	23	27	27	26	24	21	22	21	14	14	12	12	10	10	9	9	9	8	18.5	24	35
23	SAT	7	6	6	7	7	7	8	8	9	9	10	9	9	8	8	8	10	10	11	9	9	7	7	7	8.1	24	13
24	SUN	6	5	5	6	6	6	6	6	6	7	7	7	8	8	8	9	10	10	10	9	9	9	9	9	7.4	24	12
25	MON	8	7	6	8	8	8	9	9	8	8	7	7	8	8	8	8	10	10	11	9	8	8	8	8	8.3	24	12
26	TUE	8	8	8	8	8	9	10	11	14						13	13	15	15	13	14	14	14	15	14	11.7	19	17
27	WED	14	13	13	13	14	15	17	20	22	22	20	20	19	18	22	22	27	30	29	35	37	34	35	41	22.9	24	44
28	THU	37	33	30	31	26	24	21	19	16	17	18	19	19	18	20	19	20	21	21	21	21	20	21	20	22.0	24	40
29	FRI	19	18	18	19	19	19	20	19	20	20	20	20	20	19	19	20	21	19	18	14	14	14	13	13	18.2	24	23
30	SAT	12	12	12	12	13	13	13	13	14	14	14	16	17	16	16	16	17	17	17	17	16	16	16	17	14.9	24	19
MONTHLY MEAN		10	9	8	8	8	8	9	11	11	11	10	10	10	11	11	11	12	12	12	11	11	11	11	10	10.3		
NO. OF DAYS		30	30	30	29	30	30	30	30	30	29	29	28	29	28	29	30	30	30	30	30	30	30	30	30		711	
MAX.HRLY MEAN		37	33	30	31	26	24	23	27	27	26	24	21	22	21	22	22	27	30	29	35	37	34	35	41			

TABLE 3-136 TWO-HOUR AVERAGED SOILING INDEX, COHS per 1000 lin. feet WASHINGTON, JANUARY 1963

DAY OF		A M						P M						DAILY MEAN	NO.	MAX.
MONTH	WEEK	12	2	4	6	8	10	12	2	4	6	8	10			
1	TUE															
2	WED															
3	THU															
4	FRI															
5	SAT															
6	SUN															
7	MON															
8	TUE															
9 *	WED							1.7	1.6	1.7	2.7	2.5	2.7			2.7
10	THU	1.8	2.3	2.3	3.6	3.2	2.4	2.3	2.0	3.3	4.0	2.9	2.6	2.77	12	4.0
11	FRI	2.2	2.1	2.6	3.4	3.4	2.3	1.7	1.7	3.8	3.1	2.3	2.0	2.58	12	3.8
12	SAT	2.3	2.1	2.1	3.1	2.6	2.9	2.6	1.6	1.4	1.4	1.6	1.1	2.11	12	3.1
13	SUN	1.7	1.6	1.7	1.5	2.0	1.5	0.8	1.0	1.0	1.1	0.7	0.9	1.32	12	2.0
14	MON	0.5	0.6	1.2	1.7	2.2	1.5	1.2	1.0	1.6	1.6	1.8	1.4	1.42	12	2.2
15	TUE	1.4	1.7	2.0	3.2	3.4	3.1	1.5	0.9	2.0	2.8	2.0	2.4	2.24	12	3.4
16	WED	2.2	2.1	3.0	4.0	3.6	3.1	1.9	1.5	2.5	3.5	2.5	2.1	2.71	12	4.0
17	THU	2.1	2.3	2.2	2.0	3.2	2.4	1.9	1.4	1.8	2.0	1.2	1.4	2.02	12	3.2
18	FRI	1.9	1.8	1.7	2.4	3.3	3.2	2.5	2.9	2.8	2.3	2.3	2.2	2.48	12	3.3
19	SAT	1.8	2.1	1.7	2.3	2.2	2.3	2.7	1.9	1.8	1.8	1.5	1.9	2.05	12	2.7
20	SUN	1.5	1.5	1.4	1.2	1.2	1.7	1.1	0.6	1.2	1.3	2.1	1.0	1.36	12	2.1
21	MON	0.6	0.7	0.8	1.3	1.2	1.0	0.9	0.9	1.4	1.0	1.2	1.0	1.04	12	1.4
22	TUE	0.8	1.2	1.5	1.4	1.5	1.7	1.5	1.4	2.1	2.6	2.1	1.4	1.64	12	2.6
23	WED	1.4	0.9	1.3	2.2	2.3	2.0	2.4	2.2	0.9	1.1	1.4	0.8	1.62	12	2.4
24	THU	0.8	0.7	1.3	1.2	1.7	1.0	0.9	0.8	1.4	1.5	1.2	1.2	1.18	12	1.7
25	FRI	1.6	0.7	0.8	1.4	1.6	1.0	0.9	1.0	1.5	1.7	1.9	1.3	1.34	12	1.9
26	SAT	1.2	1.3	1.3	1.6	3.1	1.8	1.5	1.5	1.1	1.4	1.3	1.5	1.59	12	3.1
27	SUN	1.2	1.5	1.1	1.1	1.5	1.2	1.5	0.8	0.9	1.3	1.3	1.1	1.24	12	1.5
28	MON	1.1	0.8	1.2	1.9	1.4	1.0	1.0	1.4	1.3	1.5	1.6	1.6	1.35	12	1.9
29	TUE	1.3	1.8	2.8	3.9	3.9	2.6	2.0	1.8	1.9	1.8	2.1	2.1	2.37	12	3.9
30	WED	1.5	1.0	4.4	3.2	2.8	2.3	2.6	2.3	3.6	2.8	1.6	2.9	2.62	12	4.4
31	THU	1.4	1.5	1.9	1.9	1.9	1.6	1.3	1.3	1.5	2.2	2.2	2.2	1.78	12	2.2
MONTHLY MEAN		1.50	1.49	1.88	2.29	2.46	2.02	1.73	1.49	1.90	2.04	1.80	1.69	1.86		
NO. OF DAYS		22	22	22	22	22	22	22	22	22	22	22	22		264	
MAX.		2.3	2.3	4.4	4.0	3.9	3.2	2.7	2.9	3.8	4.0	2.9	2.9	2.77		4.4

* DATA FOR DAYS WITH FEWER THAN 7 VALID VALUES ARE PRINTED, BUT ARE NOT INCLUDED IN THE SUMMARY ROWS AND COLUMNS

TABLE 3-137 TWO-HOUR AVERAGED SOILING INDEX, COHS per 1000 lin. feet WASHINGTON, FEBRUARY 1963

DAY OF		A M						P M						DAILY MEAN	NO.	MAX.
MONTH	WEEK	12	2	4	6	8	10	12	2	4	6	8	10			
1	FRI	2.6	1.6	1.9	2.2	2.8	2.6	2.6	2.0	2.2	1.6	1.3	1.5	2.11	12	2.8
2	SAT	1.3	1.4	1.7	2.1	2.8	3.5	2.6	1.9	2.1	2.5	2.1	1.6	2.17	12	3.5
3	SUN	1.0	0.8	0.8	0.6	0.9	0.7	1.0	0.9	1.1	1.0	1.4	1.5	1.01	12	1.5
4	MON	1.2	1.4	1.4	1.8	2.1	1.1	0.9	1.1	1.5	1.9	2.1	1.6	1.54	12	2.1
5	TUE	1.2	1.5	1.4	2.6	4.1	3.7	2.3	2.3	1.9	3.2	3.1	2.6	2.53	12	4.1
6	WED	2.7	3.0	4.2	5.8	5.8	4.1	4.1	0.1		0.1	4.2	5.7	3.67	11	5.8
7	THU	6.0	4.4	3.8	5.4	6.4	6.4	3.0	3.2	4.0	3.0	2.3	1.5	4.17	12	6.4
8	FRI	1.1	0.8	1.3	1.6	1.8	1.3	0.9	1.3	1.6	1.3	1.3	2.2	1.42	12	2.2
9	SAT	2.1	1.2	0.9	1.2	2.3	2.0	1.1	1.3	1.0	1.3	1.4	1.5	1.47	12	2.3
10	SUN	0.9	0.8	1.4	1.9	2.4	2.3	1.9	1.6	2.2	1.6	2.0		1.78	11	2.4
11	MON	0.0	2.9	2.2	2.8	2.2	2.2	2.1	1.2	1.3	1.1	2.0	2.8	1.93	12	2.9
12	TUE	1.6	1.1	1.4	1.5	1.2	1.1	1.3	0.9	1.1	1.7	2.5	2.5	1.52	12	2.5
13 *	WED							1.5	1.4	1.5	1.5	1.4	2.1			2.1
14	THU	2.0	1.5	1.1	2.5	1.9	2.6	2.5	2.3	1.8	1.3	1.3	1.0	1.86	12	2.6
15	FRI	0.9	0.9	1.1	2.0	1.9	1.7	1.4	0.9	1.2	1.5	1.3	1.3	1.38	12	2.0
16	SAT	1.4	1.0	1.2	1.1	1.4	1.2	1.4	0.8	1.2	1.6	1.8	2.6	1.44	12	2.6
17	SUN	2.3	2.1	2.4	2.6	1.9	1.6	1.3	1.4	1.8	2.3	1.9	1.5	1.96	12	2.6
18	MON	1.8	1.9	2.4	4.1	4.4	4.2	1.9	1.5	1.8	2.5	2.6	1.1	2.55	12	4.4
19	TUE	1.8	1.2	1.1	2.2	3.4	1.8	1.7	1.4	2.0	1.3	1.2	1.4	1.74	12	3.4
20	WED	1.4	1.2	1.7	2.9	2.9	2.0	1.3	1.3	1.2	2.3	1.3	1.1	1.76	12	2.9
21	THU	0.9	1.1	0.7	0.8	1.4	1.2	1.4	0.9	1.4	1.5	1.2	0.9	1.16	12	1.5
22	FRI	0.8	1.0	0.8	1.3	1.3	1.6	0.8	1.3	1.3	1.5	2.0	1.2	1.28	12	2.0
23	SAT	1.5	1.0	1.4	1.9	2.1	1.5	1.3	1.2	1.6	1.4	2.2	1.8	1.61	12	2.2
24	SUN	1.6	1.3	1.2	1.6	2.0	2.4	2.6	2.1	1.7	2.0	2.7	1.1	1.89	12	2.7
25	MON	1.3	1.0	1.4	2.5	3.4	2.0	2.2	1.6	2.6	1.9	2.5	2.1	2.08	12	3.4
26	TUE	1.2	1.4	1.1	1.7	1.6	1.9	1.8	1.6	1.7	1.7	1.7	1.4	1.60	12	1.9
27	WED	1.1	1.2	1.5	1.7	1.6	1.2	1.5	1.1	2.0	2.1	2.7	1.9	[illegible]	12	2.7
28	THU	1.4	1.6	1.8	2.8	2.9	2.1	1.9	2.3	3.0	3.7	3.7	2.6	2.52	12	3.7
MONTHLY MEAN		1.63	1.54	1.65	2.30	2.59	2.25	1.84	1.50	1.82	1.86	2.12	1.89	1.91		
NO. OF DAYS		27	27	27	27	27	27	27	27	26	27	27	26		322	
MAX.		6.0	4.4	4.2	5.8	6.4	6.4	4.1	3.2	4.0	3.7	4.2	5.7	4.17		6.4

* DATA FOR DAYS WITH FEWER THAN 7 VALID VALUES ARE PRINTED, BUT ARE NOT INCLUDED IN THE SUMMARY ROWS AND COLUMNS

TABLE 3-138 TWO-HOUR AVERAGED SOILING INDEX, COHS per 1000 lin. feet WASHINGTON, MARCH 1963

DAY OF		A M						P M						DAILY MEAN	NO.	MAX.
MONTH	WEEK	12	2	4	6	8	10	12	2	4	6	8	10			
1	FRI	2.0	1.7	1.6	2.4	2.8	2.1	2.1	2.2	2.5	2.3	2.9	2.4	2.29	12	2.9
2	SAT	2.3	1.5	1.8	3.1	2.0	1.7	1.7	1.8	1.6	1.8	2.4	2.2	2.03	12	3.1
3	SUN	1.4	1.7	2.1	4.2	3.4	1.8	1.6	1.5	1.6	2.7	2.8	2.6	2.32	12	4.2
4	MON	1.3	0.8	1.6	2.8	2.9	1.7	1.6	1.6	1.9	3.3	2.9	2.2	2.07	12	3.3
5	TUE	2.7	3.5	2.7	1.9	2.1	1.4	1.8	1.7	2.4	1.7	1.2	0.9	2.04	12	3.5
6	WED	0.9	1.0	1.0	1.9	2.6	2.3	1.6	1.1	1.5	1.7	1.5	1.2	1.56	12	2.6
7	THU	1.0	0.7	1.6	2.3	1.8	1.1	0.7	0.8	1.1	1.6	1.7	2.4	1.45	12	2.4
8	FRI	3.0	1.8	1.7	2.4	2.3	1.6	1.0	0.7	0.9	1.8	2.2	2.6	1.86	12	3.0
9	SAT	2.8	3.9	3.7	2.5	2.3	2.2	1.6	1.3	1.7	1.5	1.6	1.5	2.25	12	3.9
10	SUN	1.9	1.4	1.8	2.5	1.5	1.0	0.7	0.8	0.8	0.6	1.4	1.3	1.36	12	2.5
11	MON	1.0	1.1	1.4	1.7	1.5	1.4	1.6	1.7	1.7	1.7	1.4	1.2	1.50	12	1.7
12	TUE	1.0	1.3	1.3	2.9	3.5	2.8	3.0	3.1	3.4	2.9	2.7	2.1	2.54	12	3.5
13	WED	1.2	1.9	1.3	2.3	2.9	2.7	2.8	2.3	2.8	3.3	2.5	1.1	2.31	12	3.3
14	THU	0.7	1.2	0.8	1.9	1.3	1.1	1.1	1.1	1.2	1.4	1.6	1.8	1.32	12	1.9
15	FRI	1.0	0.8	1.0	1.8	1.3	0.6	1.1	1.5	1.3	1.7	1.6	1.3	1.30	12	1.8
16	SAT	1.2	1.1	1.4	1.9	1.6	1.3	0.9	1.4	1.3	1.8	1.5	1.8	1.49	12	1.9
17	SUN	0.9	0.7	1.3	1.5	1.6	0.9	1.0	0.7	1.1	0.8	0.5	0.5	0.99	12	1.6
18	MON	0.4	0.5	0.7	1.4	0.6	0.9	0.9	1.0	1.0	1.4	1.4	1.2	0.98	12	1.4
19	TUE	0.9	0.7	0.5	1.5	2.0	1.7	1.4	2.7	1.8	1.3	0.9	0.9	1.40	12	2.7
20	WED	0.8	0.8	0.7	2.1	2.1	1.4	1.6	0.9	0.8	1.2	1.3	0.6	1.21	12	2.1
21	THU	0.9	1.0	0.8	1.3	1.4	0.9	1.2	1.2	1.5	1.6	1.3	1.1	1.22	12	1.6
22	FRI	0.3	0.8	0.6	1.4	1.1	1.0	0.9	0.9	0.9	1.1	1.4	1.2	1.01	12	1.4
23	SAT	1.5	1.0	1.1	1.5	1.4	1.3	0.7	1.0	1.2	1.9	2.2	2.4	1.47	12	2.4
24	SUN	2.6	4.2	3.6	3.4	3.1	1.3	0.9	1.1	0.7	1.9	2.1	2.3	2.30	12	4.2
25	MON	1.5	1.3	1.4	2.2	2.3	1.7	1.0	0.9	1.1	1.5	1.6	1.1	1.51	12	2.3
26	TUE	0.8	0.8	1.0	1.6	1.2	0.8	0.9	0.9	1.3	1.8	1.0	1.2	1.14	12	1.8
27	WED															
28	THU															
29*	FRI							0.6	0.7	1.0	1.3	0.8	0.9			1.3
30	SAT	1.3	0.9	1.0	2.1	1.4	1.2	0.8	0.9	1.4	1.1	1.0	0.9	1.21	12	2.1
31	SUN	0.9	1.1	1.4	1.4	0.7	1.0	0.6	0.9	0.8	1.5	1.0	0.3	1.01	12	1.5
MONTHLY MEAN		1.41	1.43	1.50	2.17	1.99	1.51	1.36	1.39	1.52	1.78	1.73	1.56	1.60		
NO. OF DAYS		28	28	28	28	28	28	28	28	28	28	28	28		336	
MAX.		3.0	4.2	3.7	4.2	3.5	2.8	3.0	3.1	3.4	3.3	2.9	2.6	2.54		4.2

* DATA FOR DAYS WITH FEWER THAN 7 VALID VALUES ARE PRINTED, BUT ARE NOT INCLUDED IN THE SUMMARY ROWS AND COLUMNS

TABLE 3-139 TWO-HOUR AVERAGED SOILING INDEX, COHS per 1000 lin. feet WASHINGTON, APRIL 1963

DAY OF		A M						P M						DAILY MEAN	NO.	MAX.
MONTH	WEEK	12	2	4	6	8	10	12	2	4	6	8	10			
1	MON	0.8	0.7	0.9	1.5	1.1	1.4	1.4	1.5	0.9	1.5	1.2	1.7	1.25	12	1.7
2	TUE	1.7	1.3	1.4	2.1	2.1	1.5	1.5	1.2	1.3	2.9	3.2	3.2	2.00	12	3.2
3	WED	2.5	2.1	1.6	3.1	1.8	2.0	0.9	1.0	1.1	1.3	1.6	1.4	1.74	12	3.1
4	THU	1.1	0.8	0.7	0.7	0.5	0.6	0.4	0.8	0.7	0.9	0.4	0.5	0.72	12	1.1
5	FRI	0.6	0.3	0.7	0.8	1.1	1.3	1.0	0.5	0.8	1.0	1.7	1.2	0.96	12	1.7
6	SAT	1.5	2.1	2.8	3.3	1.1	0.8	0.7	0.8	0.7	1.1	1.5	0.7	1.48	12	3.3
7	SUN	0.5	0.6	0.7	0.5	1.5	1.0	1.2	0.9	0.7	1.1	0.7	0.7	0.88	12	1.5
8	MON	0.9	0.7	0.6	1.7	1.0	1.6	1.0	1.0	0.8	1.0	1.1	0.7	1.06	12	1.7
9	TUE	0.5	0.8	1.0	2.0	1.6	1.7	1.9	2.2	1.6	1.3	1.7	0.9	1.47	12	2.2
10	WED	0.7	0.3	0.5	1.3	1.1	0.6	0.7	0.7	1.2	1.0	0.8	1.0	0.85	12	1.3
11	THU	0.8	0.6	0.7	1.7	0.9	0.5	0.8	0.8	0.5	0.6	0.9	0.9	0.85	12	1.7
12	FRI	0.8	1.1	0.6	0.8	0.8	0.7	0.5	0.9	0.9	0.8	0.7	0.9	0.83	12	1.1
13	SAT	0.8	0.5	0.9	1.6	0.9	0.7	0.8	0.6	1.0	1.3	1.3	0.8	0.96	12	1.6
14	SUN	0.6	0.6	0.8	0.9	0.8	0.6	0.4	0.3	0.3	1.1	0.9	0.8	0.71	12	1.1
15	MON	0.2	0.7	0.6	1.1	0.8	0.4	0.9	0.6	0.6	0.9	1.7	1.2	0.85	12	1.7
16	TUE	1.0	1.3	1.6	1.8	1.2	0.5	0.5	0.5	1.4	1.3	0.7	0.9	1.09	12	1.8
17 *	WED	0.8	0.7	0.8	1.7	1.6	1.2									1.7
18	THU															
19 *	FRI							1.0	0.8	1.3	1.4	0.8	0.8			1.4
20	SAT	0.3	0.5	0.4	0.8	0.6	0.2	0.4	0.4	0.5	0.7	0.6	1.5	0.62	12	1.5
21	SUN	0.8	0.8	0.6	0.8	0.7	0.7	0.5	0.5	1.5	1.1	0.8	0.6	0.82	12	1.5
22	MON	0.6	0.5	0.4	0.7	1.1	0.6	0.7	0.7	0.8	0.9	0.7	0.8	0.75	12	1.1
23	TUE	0.5	0.4	0.6	0.8	0.7	1.0	0.8	0.9	0.8	0.6	0.5	0.4	0.72	12	1.0
24	WED	0.4	0.3	0.3	0.8	0.8	0.7	0.5	0.8	1.0	1.1	1.4	0.7	0.79	12	1.4
25	THU	1.2	0.8	0.9	1.6	0.8	1.0	0.9	0.6	0.7	1.4	2.4	2.8	1.29	12	2.8
26	FRI	3.1	2.1	1.8	2.3	1.2	0.3	0.3	1.0	1.1	0.9	1.4	1.4	1.45	12	3.1
27	SAT	1.0	1.2	2.3	2.4	0.8	0.5	0.8	0.6	0.6	1.1	1.4	1.1	1.20	12	2.4
28	SUN	1.7	0.7	0.4	1.0	0.9	0.6	0.4	0.4	0.2	0.8	0.4	0.5	0.70	12	1.7
29	MON	0.6	0.3	0.8	1.4	0.6	0.7	1.7	0.9	0.9	0.9	0.3	0.3	0.82	12	1.7
30	TUE	0.3	0.0	0.5	1.1	1.1	0.8	0.7	0.2	0.6	0.9	0.7	0.3	0.64	12	1.1
MONTHLY MEAN		0.99	0.87	0.97	1.47	1.06	0.90	0.86	0.82	0.91	1.14	1.17	1.08	1.02		
NO. OF DAYS		27	27	27	27	27	27	27	27	27	27	27	27		324	
MAX.		3.1	2.1	2.8	3.3	2.1	2.0	1.9	2.2	1.6	2.9	3.2	3.2	2.00		3.3

* DATA FOR DAYS WITH FEWER THAN 7 VALID VALUES ARE PRINTED, BUT ARE NOT INCLUDED IN THE SUMMARY ROWS AND COLUMNS

TABLE 3-140   TWO-HOUR AVERAGED SOILING INDEX, COHS per 1000 lin. feet   WASHINGTON, MAY 1963

DAY OF		A M						P M						DAILY MEAN	NO.	MAX.
MONTH	WEEK	12	2	4	6	8	10	12	2	4	6	8	10			
1	WED	0.4		0.5	1.0	1.0	1.0	0.9	0.9	0.8	1.5	1.3	1.0	0.98	11	1.5
2	THU	0.4	0.5	0.9	1.1	1.1	0.8	0.6	0.7	0.9	1.1	3.4	3.0	1.24	12	3.4
3	FRI	2.8	2.8	3.3	3.6	4.5	1.7	0.8	0.8	0.7	0.7	1.0	0.8	2.00	12	4.5
4	SAT	1.0	1.4	1.4	1.8	2.2	1.3	0.8	0.3	0.9	0.6	0.4	0.4	1.09	12	2.2
5	SUN	0.9	0.6	0.4	0.6	0.7	0.8	0.5	0.5	0.9	0.7	0.8	0.1	0.67	12	0.9
6	MON	0.7	0.6	0.9	0.9	0.7	1.0	0.7	0.8	0.9	0.8	0.2	0.3	0.75	12	1.0
7	TUE	0.8	0.6	0.4	1.7	0.6	0.1	0.2	0.4	0.5	1.4	1.4	0.5	0.75	12	1.7
8	WED	0.7	0.6	0.9	1.4	1.2	1.2	0.8	1.0	1.0	1.1	1.0	2.4	1.16	12	2.4
9	THU	1.4	1.3	1.6	2.1	1.9	1.0	0.8	1.0	1.4	0.9	2.3	3.6	1.64	12	3.6
10	FRI	1.0	1.0	1.3	2.5	1.3	1.0	0.6	1.1	1.0	0.6	1.0	0.8	1.13	12	2.5
11	SAT	0.4	0.8	1.4	0.7	0.5	1.0	0.7	0.5	0.5	0.6	0.9	0.7	0.76	12	1.4
12	SUN	0.5	0.5	0.2	0.4	0.7	0.4	0.2	0.5	0.4	0.7	0.7	0.8	0.53	12	0.8
13	MON	0.8	0.4	1.1	1.0	0.3	0.5	0.6	1.0	0.8	0.5	0.3	0.6	0.70	12	1.1
14	TUE	0.4	0.5	1.1	1.2	1.2	1.1	1.1						0.98	07	1.2
15	WED						0.6	0.6	0.5	0.4	0.6	1.3	3.6	1.12	07	3.6
16	THU		0.8	1.4	2.1		0.9	0.7	0.4	0.6	0.5	0.7	0.6	0.90	10	2.1
17	FRI	0.7	0.4	0.7	1.5	0.9	0.6	0.5	0.8	0.6	0.7	0.7	0.5	0.75	12	1.5
18	SAT	0.1	0.4	0.6	1.2	1.0	0.8	0.3	0.6	0.6	1.1	1.7	2.0	0.91	12	2.0
19	SUN	1.5	1.4	0.9	0.9	0.9	0.5	0.3	0.1	0.3	0.8	1.4	2.0	0.95	12	2.0
20	MON	1.0	1.0	1.0	1.1	1.0	0.8	0.8	0.9	0.7	0.7	0.3	0.6	0.86	12	1.1
21	TUE	1.9	2.7	2.1	2.0	2.2	1.5	0.6	1.3	0.8	0.9	1.1	0.7	1.52	12	2.7
22	WED	0.5	0.5	1.0	1.6	1.2	0.9	0.5	1.1	0.8	1.1	0.4	0.5	0.88	12	1.6
23	THU	0.6	0.6	1.3	0.7	0.5	1.3	0.7	0.3	0.6	0.6	1.5	0.4	0.81	12	1.5
24	FRI	0.4	0.8	1.2	2.2	1.0	1.3	1.0	0.8	0.9	1.3	0.7	1.1	1.10	12	2.2
25	SAT	1.1	1.4	2.5	1.5	1.0	0.5	0.5	0.3	0.6	0.8	0.5	0.3	0.95	12	2.5
26	SUN	0.3	0.5	0.0	0.5	0.8	0.8	0.7	1.1	0.8	0.9	0.5	0.2	0.63	12	1.1
27	MON	0.4	0.4	0.6	0.9	0.6	0.8	0.3	0.6	0.5	0.6	0.6	0.2	0.59	12	0.9
28	TUE	0.2	0.1	0.4	0.3	0.5	0.6	0.6	0.3	0.6	0.9	0.9	0.9	0.56	12	0.9
29	WED	0.7	0.3	1.0	0.9	0.7	0.6	0.4	1.3	0.7	0.7	1.0	0.4	0.75	12	1.3
30	THU	0.6	0.7	0.5	0.7	0.5	1.1	0.4	0.2	0.3	1.1	2.4	1.6	0.88	12	2.4
31	FRI	1.0	0.6	0.7	1.4	1.0	0.4	0.2	0.4	0.9	0.9	2.1	2.6	1.07	12	2.6
MONTHLY MEAN		0.84	0.87	1.09	1.35	1.13	0.91	0.63	0.71	0.75	0.88	1.13	1.15	0.96		
NO. OF DAYS		29	29	30	30	29	31	31	30	30	30	30	30		359	
MAX.		2.8	2.8	3.3	3.6	4.5	1.7	1.1	1.3	1.4	1.5	3.4	3.6	2.00		4.5

TABLE 3-141 TWO-HOUR AVERAGED SOILING INDEX, COHS per 1000 lin. feet WASHINGTON, JUNE 1963

DAY	OF	A M						P M						DAILY MEAN	NO.	MAX.
MONTH	WEEK	12	2	4	6	8	10	12	2	4	6	8	10			
1	SAT	2.7	1.8	2.1	1.6	1.1	0.8		0.2	1.0	0.5	0.4	0.7	1.20	11	2.7
2	SUN	0.4	0.5	0.5	1.2	0.6	0.8	0.9	0.9	1.1	0.9	0.3	0.7	0.79	12	1.2
3	MON	0.8	0.3	0.4	1.0	0.8	0.5	0.5	1.1	1.1	0.7	0.5	0.5	0.75	12	1.1
4	TUE	0.5	0.3	0.8	0.5	0.5	0.7	0.4	0.6	0.5	0.7	0.9	1.0	0.66	12	1.0
5	WED	0.7	0.6	1.1	0.7	0.8	0.4	0.4	0.9	0.6	0.8	1.3	1.9	0.89	12	1.9
6	THU	2.1	1.8	1.7	2.3	1.5	0.8	0.6	0.6	0.8	1.5	1.4	1.8	1.46	12	2.3
7	FRI	2.0	1.3	1.4	1.6	0.9	0.6	1.1	1.0	1.6	1.4	0.9	0.4	1.22	12	2.0
8	SAT		0.5	0.2	0.5	1.1	0.3	1.0	0.9	1.4	0.5	0.7	0.7	0.74	11	1.4
9	SUN	0.5	0.4	0.6	0.6	0.4	0.6	0.5	0.8	0.7	0.9	1.1	1.8	0.77	12	1.8
10	MON	2.7	1.1	1.5	1.9	1.2	0.8	0.7	0.7	1.1	0.6	0.9	0.4	1.16	12	2.7
11	TUE	0.5	0.4	0.7	1.5	1.2	1.1	0.9	0.7	0.5	0.6	1.3	0.5	0.86	12	1.5
12	WED	0.6	0.4	0.5	0.7	0.5	0.8	0.7	0.1	0.6	1.1	0.4	0.3	0.58	12	1.1
13	THU	0.5	0.2	0.2	0.8	0.5	0.5	0.4	0.5	0.6	0.4	1.7	1.8	0.72	12	1.8
14	FRI	1.7	1.4	2.1	2.0	0.8	0.8	0.5	0.8	0.9	1.1	1.1	1.7	1.26	12	2.1
15	SAT	0.7	0.5	0.6	0.8	0.7	0.3	0.6	0.6	0.4	0.5	1.0	0.7	0.67	12	1.0
16	SUN	0.5	0.2	0.9	0.9	0.7	0.8	0.5	0.2		0.8	1.4	2.6	0.91	11	2.6
17	MON	2.9	1.6	1.5	2.9	1.2	0.5	0.6	1.1	1.1	0.4	1.1	1.1	1.37	12	2.9
18	TUE	1.4	1.8	1.3	1.6	1.6	0.7	0.6	0.7	0.7	0.8	0.8	0.9	1.10	12	1.8
19 *	WED	1.0	0.9	1.6	2.5	1.7										2.5
20	THU															
21	FRI															
22	SAT															
23	SUN															
24	MON															
25	TUE															
26	WED															
27	THU															
28	FRI															
29	SAT															
30	SUN															
MONTHLY MEAN		1.27	0.88	1.04	1.32	0.94	0.69	0.68	0.73	0.91	0.82	1.00	1.14	0.96		
NO. OF DAYS		17	18	18	18	18	18	17	18	17	18	18	18		213	
MAX.		2.9	1.8	2.1	2.9	1.7	1.1	1.1	1.1	1.6	1.5	1.7	2.6	1.57		2.9

* DATA FOR DAYS WITH FEWER THAN 7 VALID VALUES ARE PRINTED, BUT ARE NOT INCLUDED IN THE SUMMARY ROWS AND COLUMNS

TABLE 3-142 TWO-HOUR AVERAGED SOILING INDEX, COHS per 1000 lin. feet WASHINGTON, SEPTEMBER 1963

DAY OF		A M						P M						DAILY MEAN	NO.	MAX.
MONTH	WEEK	12	2	4	6	8	10	12	2	4	6	8	10			
1	SUN															
2	MON															
3	TUE															
4	WED															
5	THU															
6	FRI															
7	SAT															
8	SUN															
9	MON															
10	TUE															
11	WED															
12	THU															
13	FRI															
14	SAT															
15	SUN															
16	MON															
17	TUE															
18 *	WED							0.6	0.7	0.6	0.9	1.4	2.0			2.0
19	THU	1.2	1.2	0.9	1.9	1.5	0.7	0.4	0.6	1.0	1.4	2.0	2.5	1.32	12	2.5
20	FRI	1.7	1.6	1.8	1.6	2.3	2.5	1.9	1.1	0.6	0.8	0.9	0.9	1.50	12	2.5
21	SAT	1.3	1.4	1.6	0.9	0.9	0.7	0.7	0.5	1.1	0.7	0.5	0.5	0.95	12	1.6
22	SUN	0.3	0.6	0.3	0.3	0.6	0.3	0.3	0.1	0.4	0.2	0.4	0.6	0.41	12	0.6
23	MON	0.2	0.5	0.4	1.4	1.3	0.5	0.4	0.7	0.9	1.0	1.0	1.2	0.81	12	1.4
24	TUE	0.7	0.7	1.3	1.9	1.3	1.0	0.2	1.1	0.9	1.6	1.9	2.5	1.30	12	2.5
25	WED	2.1	2.8	2.9	3.5	3.7	1.2	0.5	0.8	0.7	0.8	1.1	0.8	1.79	12	3.7
26	THU	0.5	1.3	2.5	3.4	3.2	1.6	1.0	0.9	0.7	1.4	1.0	0.9	1.57	12	3.4
27	FRI	1.1	1.3	1.7	2.6	2.1	1.1	0.7	1.0	0.8	2.0	1.7	1.5	1.50	12	2.6
28	SAT	1.9	2.1	1.3	1.5	1.7	2.1	1.3	1.1	1.0	0.8	1.0	1.0	1.43	12	2.1
29	SUN	0.8	1.2	0.7	0.3	0.5	0.7	0.3	0.3	0.6	0.6	1.5	1.3	0.78	12	1.5
30	MON	0.7	0.3	0.1	0.0	1.0	1.0	0.3	0.8	0.5	1.5	1.4	1.5	0.80	12	1.5
MONTHLY MEAN NO. OF DAYS MAX.		12 2.1	12 2.8	12 2.9	12 3.5	12 3.7	12 2.5	12 1.9	12 1.1	12 1.1	12 2.0	12 2.0	12 2.5	1.79	144	3.7

* DATA FOR DAYS WITH FEWER THAN 7 VALID VALUES ARE PRINTED, BUT ARE NOT INCLUDED IN THE SUMMARY ROWS AND COLUMNS

TABLE 3-143 TWO-HOUR AVERAGED SOILING INDEX, COHS per 1000 lin. feet WASHINGTON, OCTOBER 1963

DAY OF MONTH	DAY OF WEEK	A M 12	A M 2	A M 4	A M 6	A M 8	A M 10	P M 12	P M 2	P M 4	P M 6	P M 8	P M 10	DAILY MEAN	NO.	MAX.
1	TUE	1.0	0.6	0.7	1.9	2.7	1.5	0.8	0.4	1.3	1.0	1.3	1.2	1.23	12	2.7
2 *	WED	1.4	0.9	0.8	1.6	1.7										1.7
3	THU															
4	FRI															
5	SAT															
6	SUN															
7	MON															
8	TUE															
9	WED															
10	THU															
11	FRI															
12	SAT															
13	SUN															
14	MON															
15	TUE															
16	WED															
17	THU															
18	FRI															
19	SAT															
20	SUN															
21	MON															
22	TUE															
23	WED															
24	THU															
25	FRI															
26	SAT															
27	SUN															
28	MON															
29	TUE															
30	WED						1.0	0.9	1.1	1.4	1.1	1.1	1.4	1.18	07	1.4
31	THU	1.2	0.7	1.3	2.6	1.9	1.3	0.8	0.8	1.4	1.3	1.2	1.2	1.34	12	2.6
MONTHLY MEAN														1.34		
NO. OF DAYS		02	02	02	02	02	03	03	03	03	03	03	03		031	
MAX.		1.4	0.9	1.3	2.6	2.7	1.5	0.9	1.1	1.4	1.3	1.3	1.4			2.7

* DATA FOR DAYS WITH FEWER THAN 7 VALID VALUES ARE PRINTED, BUT ARE NOT INCLUDED IN THE SUMMARY ROWS AND COLUMNS

TABLE 3-144 TWO-HOUR AVERAGED SOILING INDEX, COHS per 1000 lin. feet WASHINGTON, NOVEMBER 1963

DAY	OF	A M						P M						DAILY MEAN	NO.	MAX.
MONTH	WEEK	12	2	4	6	8	10	12	2	4	6	8	10			
1	FRI	1.2	0.9	1.0	1.6	1.7	1.9	2.0	2.1	1.6	0.9	1.3	0.9	1.46	12	2.1
2	SAT	0.6	0.4	0.5	1.2	0.6	1.0	0.7	0.6	0.9	0.7	0.8	0.7	0.77	12	1.2
3	SUN	0.6	0.4	0.4	1.2	0.8	0.5	0.4	0.7	1.1	1.9	1.9	2.3	1.06	12	2.3
4	MON	2.9	2.1	2.0	3.1	2.4	1.3	1.0	1.3	2.4	1.6	1.7	1.2	1.96	12	3.1
5	TUE	1.6	1.0	1.1	2.8	2.1	1.8	1.6	1.2	2.2	2.0	2.1	2.0	1.84	12	2.8
6	WED	1.6	1.2	1.0	1.9	1.9	1.4	1.0	1.2	1.4	0.8	0.8	0.2	1.25	12	1.9
7	THU	0.3	0.4	0.6	1.2	1.8	1.1	1.3	0.6	0.9	0.5	0.5	0.3	0.84	12	1.8
8	FRI	0.5	0.2	0.4	1.1	1.0	0.5	1.0	1.1	1.3	1.1	0.7	0.8	0.84	12	1.3
9	SAT	0.7	0.7	0.3	1.2	1.0	0.9	0.6	0.9	1.0	1.7	2.2	2.4	1.16	12	2.4
10	SUN	3.5	2.7	2.9	3.7	2.4	2.3	1.3	1.0	1.7	1.9	2.0	1.0	2.25	12	3.7
11	MON	1.5	1.0	1.8	2.9	1.6	0.8	0.6	0.5	1.4	3.3	2.4	1.0	1.60	12	3.3
12	TUE	1.3	1.4	1.2	1.7	1.2	1.3	0.9	0.8	1.4	2.1	2.5	3.1	1.62	12	3.1
13	WED	2.6	3.4	2.8	4.9	4.0	0.9	0.6	1.0	1.4	1.4	1.4	1.1	2.17	12	4.9
14	THU	0.8	1.0	1.3	2.3	1.7	1.2	1.0	0.9	1.6	1.3	1.0	0.9	1.28	12	2.3
15	FRI	1.4	1.1	0.8	1.7	1.2	1.7	1.3	1.2	1.9	2.3	2.8	3.7	1.78	12	3.7
16	SAT	3.2	3.0	3.1	3.1	3.3	2.7	1.6	2.0	2.3	2.8	2.4	1.9	2.67	12	3.3
17	SUN	2.6	2.3	2.8	3.5	3.0	1.7	1.4	1.2	1.6	2.2	2.0	2.0	2.23	12	3.5
18	MON	1.3	1.5	1.9	2.8	2.7	2.2	1.7	2.5	3.0	2.5	1.9	1.1	2.12	12	3.0
19	TUE	0.9	0.5	1.1	1.9	1.5	0.8	0.8	1.1	2.0	2.7	2.7	3.9	1.70	12	3.9
20	WED						2.5	1.3	1.3	2.3	1.9	1.6	1.3	1.77	07	2.5
21	THU	1.1	1.0	1.6	2.7	2.5	2.6	1.6	2.1	3.1	3.3	2.0	2.3	2.20	12	3.3
22	FRI	4.5	4.2	4.0	5.2	4.9	3.9	2.1	2.3	2.0	1.6	1.3	1.0	3.12	12	5.2
23	SAT	1.1	0.5	0.7	1.4	1.6	1.4	1.1	1.1	1.3	1.3	0.9	0.4	1.11	12	1.6
24	SUN	0.7	0.6	0.6	1.4	1.2	1.0	0.9	1.1	1.1	1.3	1.3	1.7	1.12	12	1.7
25	MON	1.3	0.8	1.9	1.8	1.3	0.4	0.5	1.4	2.3	2.6	2.4	1.7	1.59	12	2.6
26	TUE	1.4	0.8	1.6	3.0	3.1	2.1	2.1	2.2	0.9	1.4	1.6	1.3	1.84	12	3.1
27	WED	1.4	1.7	1.9	2.2	3.6	2.0	1.1	1.9	2.7	3.8	4.6	4.6	2.67	12	4.6
28	THU	2.0	1.0	0.4	2.3	2.4	2.5	1.4	1.4	2.0	2.2	2.2	1.8	1.84	12	2.5
29	FRI	1.4	1.1	1.4	1.0	1.3	0.8	0.6	0.9	1.1	0.6	0.6	0.9	1.00	12	1.4
30	SAT	0.4	0.3	0.3	0.9	0.9	1.0	0.9	1.2	1.0	1.1	1.3	1.1	0.92	12	1.3
MONTHLY MEAN		1.57	1.33	1.47	2.31	2.07	1.58	1.18	1.34	1.74	1.86	1.80	1.66	1.66		
NO. OF DAYS		29	29	29	29	29	30	30	30	30	30	30	30		355	
MAX.		4.5	4.2	4.0	5.2	4.9	3.9	2.1	2.5	3.1	3.8	4.6	4.6	3.12		5.2

TABLE 3·145 TWO HOUR AVERAGED SOILING INDEX, COHS per 1000 lin. feet WASHINGTON, DECEMBER 1963

DAY OF		A M						P M						DAILY MEAN	NO.	MAX.
MONTH	WEEK	12	2	4	6	8	10	12	2	4	6	8	10			
1	SUN	0.8	1.1	1.9	2.3	1.9	0.9	0.9	0.8	1.7	1.6	1.8	2.6	1.56	12	2.6
2	MON	2.5	2.4	1.8	3.0	3.4	2.8	2.1	2.4	2.5	1.6	1.3	1.5	2.31	12	3.4
3	TUE	2.1	1.7	2.0	2.5	2.9	2.3	1.8	1.2	2.1	1.8	1.6	1.4	2.01	12	2.9
4 *	WED	1.0	1.1	1.2	1.7	1.9							1.6			1.9
5	THU	1.6	1.7	2.1	2.6	2.8	2.5	2.7	2.2	3.4	2.2	2.2	1.9	2.38	12	3.4
6	FRI	1.5	1.4	2.1	3.0	2.5	1.8	1.5	1.6	2.0	2.1	2.1	2.4	2.03	12	3.0
7	SAT	3.5	4.1	3.9	4.2	4.2	2.6	1.9	2.0	2.8	2.7	3.2	2.5	3.18	12	4.2
8	SUN	3.1	3.5	2.7	3.4	2.2	2.1	1.6	1.8	1.6	1.8	0.8	0.8	2.16	12	3.5
9	MON	1.2	1.5	1.9	2.8	2.6	1.3	1.6	1.5	1.7	1.3	1.2	1.2	1.69	12	2.8
10	TUE	1.1	1.1	1.7	1.4	1.6	1.1	1.3	1.1	1.3	1.3	0.9	1.1	1.29	12	1.7
11	WED	0.9	0.9	1.5	1.9	2.6	1.6	1.2	2.0	2.0	1.6	1.4	1.4	1.63	12	2.6
12	THU	1.1	1.2	1.3	1.9	2.6	2.3	2.0	2.1	3.2	3.6	3.5	3.4	2.41	12	3.6
13	FRI	3.3	2.6	3.0	2.7	2.7	1.7	1.1	1.3	2.0	2.1	1.9	2.0	2.25	12	3.3
14	SAT	1.6	1.4	1.8	2.2	2.4	1.9	1.5	1.3	1.2	0.9	1.4	1.1	1.62	12	2.4
15	SUN	0.8	0.8	0.8	1.0	1.1	1.1	1.0	0.9	1.3	1.2	1.1	1.0	1.05	12	1.3
16	MON	1.1	0.8	1.5	1.9	1.9	1.2	1.1	1.3	1.7	1.8	1.4	1.2	1.46	12	1.9
17 *	TUE	0.8	1.0	1.5	2.5	2.1										2.5
18	WED						2.7	3.0	2.3	3.6	2.3	1.7	1.3	2.45	07	3.6
19	THU	1.3	1.4	2.3	2.1	1.4	1.6	1.4	1.2	1.4	1.4	1.0	1.9	1.57	12	2.3
20	FRI	1.0	1.0	1.5	2.2	1.8	1.6	1.3	1.3	1.7	1.5	1.4	1.5	1.52	12	2.2
21	SAT	1.2	1.6	1.6	2.2	2.2	1.6	1.6	1.5	1.5	1.7	1.7	1.9	1.73	12	2.2
22	SUN	1.9	1.4	1.8	2.4	2.3	2.0	1.9	1.5	2.1	2.4	2.7	2.9	2.14	12	2.9
23	MON	3.1	3.1	2.3	3.7	3.2	3.4	4.0	3.3	2.4	2.4	1.9	1.7	2.90	12	4.0
24	TUE	1.7	1.9	1.8	2.8	2.8	2.2	2.0	2.6	2.9	2.5	2.0	2.1	2.32	12	2.9
25	WED	2.0	2.9	2.5	2.7	2.1	1.5	1.1	0.8	1.3	1.4	2.1	2.0	1.92	12	2.9
26	THU	3.0	2.8	2.6	3.2	3.0	2.6	2.4	3.1	2.7	3.5	3.2	5.2	3.15	12	5.2
27	FRI	7.2	2.8	3.7	4.6	4.0	3.4	1.6	1.6	2.0	2.0	2.0	2.2	3.12	12	7.2
28	SAT	2.5	1.8	0.9	1.0	1.3	1.1	1.2	1.1	1.3	1.8	1.9	1.7	1.51	12	2.5
29	SUN	1.7	1.4	1.3	1.4	2.7	1.3	0.8	0.7	1.3	1.9	1.5	1.1	1.46	12	2.7
30	MON	1.1	1.1	1.7	3.8	2.5	1.8	1.4	1.9	1.7	1.5	1.9	2.7	1.96	12	3.8
31	TUE	3.0	2.7	3.1	3.3	3.1	2.2	1.9	1.8	1.8	2.1	1.9	1.9	2.44	12	3.3
MONTHLY MEAN		2.12	1.95	2.11	2.68	2.62	1.98	1.73	1.70	2.05	1.97	1.86	1.97	2.02		
NO. OF DAYS		28	28	28	28	28	29	29	29	29	29	29	29		348	
MAX.		7.2	4.1	3.9	4.6	4.2	3.4	4.0	3.3	3.6	3.6	3.5	5.2	3.18		7.2

* DATA FOR DAYS WITH FEWER THAN 7 VALID VALUES ARE PRINTED, BUT ARE NOT INCLUDED IN THE SUMMARY ROWS AND COLUMNS

TABLE 3-146 TOTAL SUSPENDED PARTICULATE MATTER, μgm/m³ WASHINGTON, 1963

	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT.	OCT.	NOV.	DEC.
1		113	140	98*	48	139	63*	126	60	78		45*
2		78	99			75*	95	119	87	103		45*
3		68*	90*	154	128	75*	81	111	77	100	49*	90
4		68*	90*	106	115		70	65*	87	94	49*	76
5	105		105	76	92*	65	73	65*	100	157	82	107
6	123		74	92	92*	115	89	74	81	112*		104
7	144	272	68	75*	116	117	67*	110		112*		123
8	152			75*	106	100	67*	134		146	36	88*
9	149			97	150	94*	87	127	105	112	49	88*
10	123	77	74	82		94*	81	112		182	74*	72
11	130	100	58	67		102	97	102*	121	123	74*	68
12	93	89	81	81		85	108	102*	150	119	76	79
13	78*	99	126	79	96	75	105		137		103	
14	78*	118	129	59*	128	101	61*				72	90
15	113	98	75	59*	90	93	61*	59		224	65	54*
16	174	81	88	79	88	80*	89	86	60	243	106	54*
17	119	103*	60*	98	89	80*	102	94	81	251	74*	74
18	92	103*	60*	116	51	136	95	74*	77	283	74*	74
19	118			165	95*	147	229	74*	105	305	119	
20	57*			148	95*	116	109	95	149	190*	108	71
21	57*	89	55	98*	96	86	62*	93		190*	91	78
22	84	67	56	98*		73	62*			146	136	97*
23	88	66	69	81	75	155	119			94	45	97*
24	75	71*	105*	58	83		83	126	90	153	57*	
25	79	71*	105*	68	146	122	122	69*	143	185	57*	74
26	78	91	111	94	84*	89	140	69*	137	108	67	68
27	48*	94	78	93	84*	117	108	130	118	135*	81	149
28	48*	93	90	82*	85	97	90*	97	111*	135*	125	93
29	91		128	82*	66	86	90*		111*	79	80	76*
30	90		90	75	71	63*	83		52			76*
31	80		98*		100		95	92				114
MONTHLY MEAN	99	96	89	91	95	99	93	96	102	154	78	83

TABLE 3-147 GROSS BETA RADIOACTIVITY, picocuries/m³ WASHINGTON, 1963

	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT.	OCT.	NOV.	DEC.
1			7.9	7.2*	3.9	9.1	4.2*	4.9	3.2	2.3		0.5*
2		7.4	4.5			5.3*	4.7	5.5	3.4	2.1		0.5*
3			6.9*	9.7	10.8	5.3*	4.7	6.6	4.7	2.8	0.7*	0.9
4			6.9*	13.2	9.9		7.8	6.1*	3.7	2.7	0.7*	0.6
5			2.5	7.0	8.8*	6.5	10.5	6.1*	1.0	2.4	1.3	0.7
6			2.5	7.5	8.8*	5.5	11.1	7.6	4.2	3.3*		0.8
7			4.8	10.6*	9.4	8.4	10.2*	9.3		3.3*		0.6
8				10.6*	13.7	4.7	10.2*	9.3		3.8	0.0	0.8*
9				11.4	7.4	4.9*	7.3	6.1	2.4	2.2	0.1	0.8*
10			6.5	8.7		4.9*	7.8	9.1		2.3	0.4*	0.2
11			7.6	1.5		12.6	5.1	6.9*	2.6	1.9	0.4*	0.2
12			3.3	2.3		10.0	5.8	6.9*	3.0	2.2	1.1	0.6
13			1.8	6.5	6.3	6.1	6.9		2.8		0.5	
14			3.6	8.7*	9.6	8.2	7.7*				0.7	0.4
15			3.8	8.7*	5.9	10.0	7.7*	4.9		2.1	0.3	0.7*
16			3.8	10.7	2.6	10.9*	5.9	4.4	3.7	2.3	0.8	0.7*
17			8.3*	12.0	4.8	10.9*	7.0	5.5	4.4	2.4	1.1*	0.6
18			8.3*	11.3	3.6	13.3	7.3	3.7*	1.4	1.6	1.1*	0.7
19				11.7	11.3*	14.5	6.3	3.7*	0.7	2.0	1.2	
20				15.8	11.3*	13.7	4.6	1.5	2.3	1.9*	2.2	0.9
21			4.9	15.4*	8.4	5.0	7.9*	1.4		1.9*	1.7	0.6
22			2.6	15.4*		6.3	7.9*			1.4	1.3	0.3*
23			6.5	13.8	8.6	21.4	5.0			1.3	0.6	0.3*
24	6.9		7.7*	6.0	4.0		5.0	4.3	3.7	1.2	1.2*	
25	7.1		7.7*	7.5	9.6	9.4	5.2	2.4*	3.2	1.5	1.2*	0.7
26	7.3	6.5	8.8	9.7	7.8*	8.5	6.0	2.4*	2.1	0.8	1.6	0.7
27	7.7*	6.2	10.6	8.5	7.8*	9.9	8.1	2.2	2.7	1.0*	1.4	1.0
28	7.7*	8.2	7.9	8.9*	9.9	4.6	4.2*	2.8	4.5*	1.0*	1.9	0.6
29	9.6		10.7	8.9*	6.3	2.9	4.2*		4.5*	1.3	1.1	0.6*
30			13.6	9.0	3.3	4.2*	3.4		1.0			0.8*
31	10.9		7.2*		10.7		7.3	2.7				0.8
MONTHLY MEAN	8.2	7.1	6.3	9.6	7.9	8.5	6.7	5.1	3.0	2.0	1.0	0.6

APPENDIX A: INSTRUMENTATION AND METHODS

INSTRUMENTATION

The gaseous pollutant instrumentation was originally developed and fabricated by Beckman Instruments, Inc., under contract with the Public Health Service; the calibration techniques were developed by the CAMP staff. When subsequent field operations have disclosed difficulties, instruments have been modified by CAMP personnel; all the instruments have been so modified, and some of the changes have been major. In addition, the calibration techniques, particularly for the "wet" instruments, have been continuously studied and frequently revised.

The gas-measuring instruments, as modified, are thus unique. The other instruments at the CAMP stations (high-volume and spot-tape particulate samplers) are, in contrast, intentionally similar to many others used throughout the country.

Sulfur Dioxide

The SO_2 instrument is based on a conductometric analysis. The sample air stream is drawn through a dilute sulfuric acid solution containing hydrogen peroxide. SO_2 in the sample stream is oxidized to further ionize the solution. Any change in the solution conductivity, compared to a reference cell, is proportional to the SO_2 concentration, and is measured in a range corresponding to 0-2 ppm of SO_2.

This instrument is very stable and presents few calibration difficulties. The electronics are checked daily by switching to a built-in circuit that simulates 1.5 ppm SO_2. At least weekly, the air flow is manually eliminated to simulate a zero condition. The upscale range is statically calibrated at least monthly with standard solutions, and very little drift has been experienced. Dynamic calibration is performed at least once a year with standard gas mixtures.

The response time of the SO_2 instrument is about 8 to 12 minutes; this lag causes some smoothing of concentration peaks of 10-minute duration, which are believed to occur in some locations. Since the instrument response is largely a function of the reagent movements, improvements are being sought in the liquid flow controls and design details.

The conductometric analysis is considered very accurate; although it is sensitive to any ionizable substance, it is essentially specific for SO_2 (including accompanying SO_3) because other ionizing substances do not occur to any significant extent in the normal urban atmosphere.

Oxides of Nitrogen

The NO_2 instrument utilizes a colorimetric technique, incorporating Saltzman reagent to quantitatively form a magenta color.[17] The color is measured by a ratio photometer (operating at 545 millimicrons) that has a 90 percent response equivalent to 1 ppm of NO_2. Such colorimetric analysis is considered accurate within 10 percent.

After the NO_2 has been extracted, the sample air stream is bubbled through an acidified potassium permanganate solution to convert NO in the stream to NO_2. It then passes into an identical instrument, which thus measures the original NO concentration as NO_2.

These instrument systems are subject to considerable zero drift; hence they are purged (with carbon-filtered air) daily at a time when pollutant levels are usually low, the zero correction being recorded daily and reset when the drift becomes excessive. The scale range is calibrated with colored optical filters at least biweekly and also after each cleaning or adjustment of the photometer. In addition, both instruments are dynamically calibrated periodically with standard gas mixtures.

The response time of the NO_x instruments is about 15 to 20 minutes, part of which is inherent in the reaction that produces the reagent color change; the remainder is due to engineering features of the instruments necessary to insure the desired precision. Although this response time is the longest of any of the CAMP instruments, it is not considered a major problem because NO_x levels are believed to fluctuate less rapidly than those of other pollutants.

Total Oxidant

The total oxidant instrument reacts the sample air stream with a neutral 10 percent potassium iodide (KI) solution, releasing free iodine in the presence of oxidizing agents. A ratio colorimeter (operating at 345 millimicrons) measures the color of the liberated iodine against a reference, operating in the range 0-0.5 ppm of oxidants. The instrument will record the presence of any substance capable of oxidizing iodide in the KI solution, such as ozone, the peroxyacetyl nitrates, to a lesser extent nitrogen dioxide, and others.

Sulfur dioxide produces a negative interference, driving the oxidation reaction back toward the neutral potassium iodide. The effect of this interference on the instrument, and hence on the recorded data, can be seen in Figure A-1. The figure presents recorded traces of oxidant levels from two instruments operating side by side, one with and one without an absorber device to remove SO_2; the simultaneous trace of SO_2 levels is also included. The interference effect is obvious: during the morning, when SO_2 levels were high, the oxidant instrument without the filter recorded essentially no oxidant, although the other indicated levels up to 0.08 ppm. As SO_2 levels decreased, the unfiltered instrument began to record the oxidant, and by mid-afternoon the two instruments were responding similarly.

This interference is of course very troublesome, and dictates extreme caution in interpreting any type of total oxidant data from any location where SO_2 occurs simultaneously in appreciable amounts. The large proportion of time at such sites for which zero oxidant concentration is reported represents those times when the oxidant concentration was truly zero plus those times when SO_2 completely suppressed the oxidant measurement; any non-zero oxidant level recorded may also be lower, by an unknown amount, than the actual atmospheric concentration. Thus the only unequivocal statement that can be made is that the appearance of a measured oxidant value indicates the presence of that concentration or higher in the atmosphere.

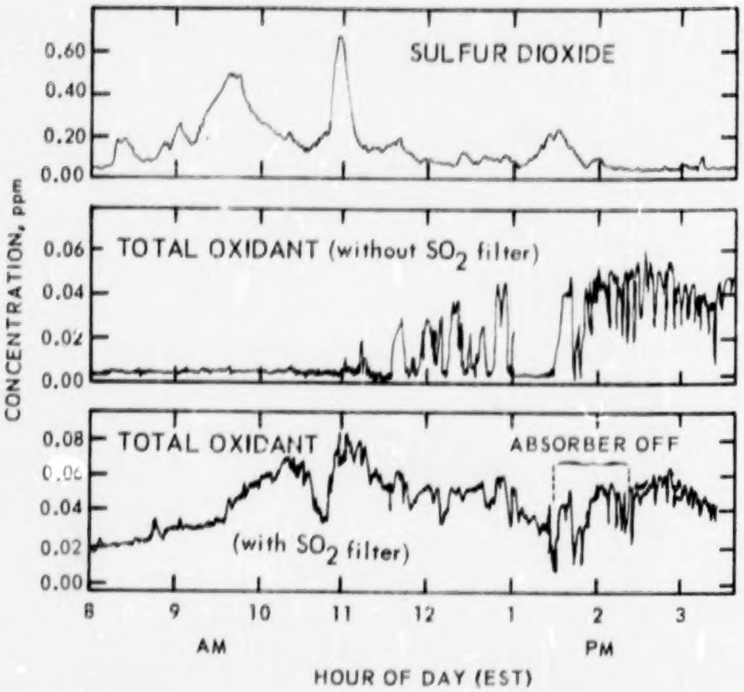

Figure A-1. Effect of sulfur dioxide on recorded total oxidant measurements.

If the SO_2 interference can be quantitated, of course, simple calculations can provide more meaningful oxidant information. Such a correction has been used with some sucess for short periods of data, but cannot be applied generally to all of the CAMP data. The absorber devices to remove SO_2 from the sample stream, and hence prevent the chemical interference, have been employed by CAMP routinely since January 1964, but none were operational during the 1962-1963 period reported herein.

Apart from the SO_2 interference, the oxidant instrument system presents sensitivity and stability problems, and satisfactory data are acquired only with extensive and careful maintenance. Frequent calibration similar to that described for the oxides of nitrogen system is required, including a daily instrument purge from 1 to 2 a.m.

Total Hydrocarbon

The total hydrocarbon instrument utilizes a flame ionization detector, in which the sample air stream is introduced into a hydrogen-air flame, where the hydrocarbons are dissociated in the intense heat. The positive carbon ions produced by the dissociation are collected by an electrode above the flame, and the current produced is proportional to the number of carbon atoms ionized. The operating range of the instrument can be as sensitive as 0-10 ppm carbon atoms, although CAMP operates the instrument on a scale of 0-40 ppm to insure inclusion of all peak levels.

The flame ionization technique is well established and is considered very precise, and the instrument operates with little difficulty. Because the response of the hydrocarbon instrument is normally almost instantaneous, CAMP has incorporated an integrating flask into the system to provide data averaged over about 5 minutes. The system is dynamically calibrated twice weekly on standardized air-methane mixtures in the near-zero and 20 ppm ranges.

Carbon Monoxide

The CO instrument is a short-path monobeam infrared analyzer, based on the molecular absorption of infrared radiation by carbon monoxide; it is an interesting variant of the more conventional long-path infrared analyzers. The single infrared energy beam is directed in series, as indicated in Figure A-2, through a sample cell containing the flowing sample air stream, and through sample and reference compartments of a dual detector unit, charged with CO-argon mixtures.

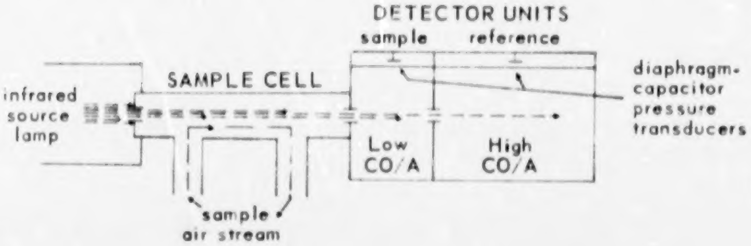

Figure A-2. Short-path monobeam infrared analyzer.

The sample detector compartment is charged with a low concentration of CO, which absorbs a quantity of radiant energy dependent upon the amount previously absorbed by the sample air stream. The reference detector compartment contains a high CO concentration, which absorbs enough radiation to be largely unaffected by the slight fluctuations in incident energy produced by varying absorption in the sample cell and sample detector unit. It thus provides a very stable reference, with which absorption in the sample detector is differentially compared. In each compartment, the energy absorbed is measured by pressure transducers.

The CO instrument can have a very rapid response, but about 5 minutes integration time has been introduced in the same manner as with the hydrocarbon system. It is extremely sensitive along the entire range (0-100 ppm), and is dynamically calibrated twice weekly in the manner described for the hydrocarbon instrument.

Both water vapor and carbon dioxide absorb infrared radiation at wavelengths very near the wavelength of CO. The degree of such interference is periodically measured by filtering the sample stream through columns of silica gel and ascarite. When interferences are significant, the CO data are declared invalid and not reported. Because of such interference early in the operation of the CAMP program, valid CO data were often sparse, and on occasion nonexistent, during 1962 and 1963. Since early 1964, this problem has been largely eliminated by adding an infrared filter, which narrows the radiation band to converge on the CO absorption wavelength.

Particulates

The high-volume air samplers in use at the CAMP stations are of the type used by the National Air Sampling Network (NASN) and by most state and local agencies. Particulate samples are collected on 8- by 10-inch glass-fiber filters considered 100 percent efficient for particles about 0.3 micron in diameter and larger; vertical influent airflow velocity limits the sample to particulates smaller than about 100 microns in diameter.

The filters are analyzed in the same manner as routine NASN samples. They are equilibrated at 75° F and 50 percent relative humidity overnight prior to determination of both tare and total particulate weights. Gross beta radioactivity* is measured with a proportional gas flow counting chamber when the filter is 4 days old and again several days later. The apparent half-life so determined is used to calculate the reported values representing activity on the day sample was collected; these values are also corrected for counter efficiency, filter absorption, and self-absorption. More detailed descriptions of analytical procedures and sampling methods are available in the 5-year summary of NASN operations.[18]

The multi-purpose shelters used during 1963 to house the particulate instruments at the CAMP stations are not identical with those used for the high-volume samplers at the NASN stations. Although the differences are slight and were not expected to affect the collection of particulates, later checks have revealed that the particulate data from the CAMP stations are systematically lowered by an unknown amount. Thus any comparison with NASN data is open to doubt.

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*Gross beta radioactivity is measured by the Public Health Service's Division of Radiological Health with samples supplied by the Division of Air Pollution.

Soiling index measurements are obtained at the CAMP stations with a standard automatic paper tape sampler. Air is drawn at 0.25 cfm through a 1-inch circular "spot" on Whatman No. 4 filter paper tape for a 2-hour period, the sampler advancing the tape automatically. The tapes are periodically removed and the percentage of light transmission through the soiled spots is compared to that of the clean tape.

DATA RETRIEVAL SYSTEM

Each of the gaseous pollutant instrument systems produces an electric output signal, which drives a strip chart recorder. At 5-minute intervals, the signal is momentarily diverted to an analog-to-digital recorder, which records the magnitude of the signal on punched paper tape. Thus the basic data represent the instantaneous instrument response value recorded at 5-minute intervals.

The raw data are transferred from punched paper tape to punched cards for computer use by an automatic translator. The actual pollutant concentrations are calculated by a computer program from the raw data, station operator's logs, and the known instrument parameters, and are stored on magnetic tape for subsequent analysis. Throughout the several steps of this process, the time synchronization and completeness of the data are checked by hand. All unusually high concentrations or abrupt changes in concentration are manually checked against the recorder charts before the data are accepted as valid.

DATA ANALYSIS

The information presented in this volume is derived from the data through the application of several analytical techniques. Some of these are common statistical methods, whereas others have been modified specifically for use with the CAMP data. The tremendous quantities of data have necessitated the programming of even the simplest operations for the digital computer facility of the Robert A. Taft Sanitary Engineering Center. The application of frequency distribution analysis to the CAMP data is sufficiently specialized to warrant its description here, both as background to the results reported in Part 2 and as an illustration of the type of additional material available on request.

A frequency distribution analysis summarizes the frequency of occurrence of the various pollutant concentrations recorded. The pollutant concentrations tabulated in the frequency distribution tables represent the concentration that was not exceeded by the specified percentage of the total data considered. Although such a distribution is properly termed a relative cumulative frequency distribution, the phrase "frequency distribution", or merely "distribution", is used in the text for convenience. Frequency distributions of this type provide a convenient means for determining the median pollutant concentration and data for other specific frequencies, such as the concentration exceeded 2 percent of the time or the concentration below which the pollutant level fell 10 percent of the time.

The graphic presentations of frequency distributions are drawn to logarithmic-probability scales; if the logarithms of the pollutant concentrations were distributed according to a normal probability distribution, the resulting curve would be linear, and the data would be described as being log-normally distributed. The slope of a curve plotted to such scales is a function of the variance of the population of data included, a steeper slope representing more variable pollutant levels. The curve's vertical placement is determined by the magnitude of the pollutant concentrations. Thus a curve that has an inflection represents data recorded from two relatively distinct populations with differing variances or levels.

APPENDIX B: REFERENCES

1. HEARINGS before a SPECIAL SUBCOMMITTEE ON AIR AND WATER POLLUTION of the COMMITTEE ON PUBLIC WORKS, U.S. SENATE, Eighty-Eighth Congress, First Session, September 9, 10, and 11, 1963, U.S. Government Printing Office, Washington, D.C., 20025, 1963.

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GPO 827-234-15